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SITE ASSESSMENT REPORT FOR SIGSBEE MARINA WITH TRANSMITTAL LETTER NAS  
KEY WEST FL  
11/20/2008  
TETRA TECH NUS



AIK-08-0584

November 20, 2008

Project Number 00979

*via U.S. Mail*

Beverly Washington  
Naval Air Station Building 135  
P.O. Box 30  
Jacksonville, FL 32212

Reference: CLEAN Contract No. N62467-04-D-0055  
Contract Task Order No. 0095

Subject: Site Assessment Report for Sigsbee Marina, Rev. 0, Naval Air Station,  
Key West, Florida

Dear Ms. Washington:

I have enclosed a "Living CD" containing the PDF file for the Site Assessment Report for Sigsbee Marina, Rev. 0, Naval Air Station, Key West, Florida. This file is being sent via U.S. Mail to meet TtNUS's contractual obligation under CTO 0095. The contents of this report were discussed and conditionally approved by the NAS Key West Partnering Team during its October 2008 meeting. Thus, I am not expecting any comments on this document.

Please call me at (803) 641-4943, if you have any questions regarding the enclosed document.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. M. Bryan'.

C. M. Bryan  
Project Manager

CMB:spc

c: Ms. Debra M. Humbert (Cover Letter Only)  
Mr. M. Perry/File  
File 00979-7.2.1



# Comprehensive Long-term Environmental Action Navy

CONTRACT NUMBER N62467-04-D-0055



Rev. 0  
11/18/08

## Site Assessment Report for Sigsbee Marina

Naval Air Station Key West  
Key West, Florida

Contract Task Order 0095

November 2008



Southeast

NAS Jacksonville

Jacksonville, Florida 32212-0030

**SITE ASSESSMENT REPORT  
FOR  
SIGSBEE MARINA**

**NAVAL AIR STATION KEY WEST  
KEY WEST, FLORIDA**

**COMPREHENSIVE LONG-TERM  
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT**

**Submitted to:  
Naval Facilities Engineering Command  
Southeast  
NAS Jacksonville  
Jacksonville, FL 32212-0030**

**Submitted by:  
Tetra Tech NUS  
661 Andersen Drive  
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**CONTRACT NUMBER N62467-04-D-0055  
CONTRACT TASK ORDER 0095**

**NOVEMBER 2008**

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## ACRONYMS/ABBREVIATIONS

ABB	ABB Environmental Services, Inc.
A/G	Aboveground
B&RE	Brown and Root Environmental, Inc.
bls	Below land surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CoC	Contaminant of Concern
CTO	Contract Task Order
DPT	Direct Push Technology
DRO	Diesel Range Organic
DTW	Depth to Water
EDB	Ethylene Dibromide
EPA	United States Environmental Protection Agency
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FID	Flame Ionization Detector
FKAA	Florida Keys Aqueduct Authority
FL-PRO	Florida Petroleum Residual Organics
GAC	Granular-activated Carbon
GAG	Gasoline Analytical Group
GCTL	Groundwater Cleanup Target Level
HSA	Hollow-stem Auger
HSTAIC	Harry S. Truman Animal Import Center
ID	Inside Diameter
IDW	Investigation Derived Waste
IR	Installation Restoration
K	Hydraulic Conductivity
KAG	Kerosene Analytical Group
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
msl	Mean Sea Level
MTBE	Methyl tertiary-butyl ether
NAS	Naval Air Station
OVA	Organic Vapor Analyzer
PAH	Polynuclear Aromatic Hydrocarbon

PE	Polyethylene
ppm	Parts per Million
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
SAR	Site Assessment Report
SCTL	Soil Cleanup Target Level
SOP	Standard Operating Procedure
NAVFAC SE	Naval Facilities Engineering Command, Southeast
SWL	Static Water Level
SWMU	Solid Waste Management Unit
TOC	Top of Casing
TOX	Total Organic Halide
TRPH	Total Recoverable Petroleum Hydrocarbon
TtNUS	Tetra Tech NUS, Inc.
UST	Underground Storage Tank
VOC	Volatile Organic Compound

## EXECUTIVE SUMMARY

Tetra Tech NUS, Inc. (TtNUS) has been authorized by Naval Facilities Engineering Command, Southeast (NAVFAC ES) to prepare a Site Assessment Report (SAR) for the Sigsbee Marina site at Naval Air Station (NAS) Key West, Florida. This SAR has been prepared to evaluate soil and groundwater conditions in the vicinity of a leak from an underground fuel line that supplied diesel fuel to a pump island and to investigate further 'aged' petroleum products discovered in the subsurface.

### **Site Assessment Activities**

The following site assessment activities were conducted by TtNUS:

- Reviewed available Navy documents to collect historical information about the site, evaluate public and private potable wells, locate utility line areas, locate nearby surface water bodies, and assess surface hydrology and drainage,
- Conducted an assessment of soil and groundwater at the site using Direct Push Technology (DPT) methods to advance twenty-two borings and headspace screening on soil samples
- Collected soil samples from three locations for laboratory analysis of volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), and total recoverable petroleum hydrocarbons (TRPH),
- Collected groundwater samples from DPT boreholes for VOC and PAH analysis,
- Installed five shallow monitoring wells and one deep monitoring well to assess the horizontal and vertical extent of contamination,
- Collected groundwater samples from the permanent monitoring wells for laboratory analysis of VOCs, PAH and TRPH.

### **Conclusions**

The following conclusions were drawn based on site assessment activities:

- Concentrations of petroleum contaminants detected in the soil samples collected for this investigation were below Soil Cleanup Target Levels (SCTLs) for Residential Direct Exposure, as specified in the Florida Administrative Code (FAC) Chapter 62-777, Table II.
- Free product was not observed during the site assessment activities.

- Concentrations of methyl tertiary-butyl ether (MTBE) and acrylonitrile were detected slightly above their respective Groundwater Cleanup Target Levels (GCTLs). All other contaminants of concern (CoCs) in site groundwater were below the GCTLs, as specified in FAC Chapter 62-777, Table I
- Prior IRA/source removal activities appears to be effective and only a very minimal residual contaminant concentration exist in a small area of the site

### **Recommendation**

Based on the chemical data presented in this SAR and the requirements of Chapter 62-770, FAC, TtNUS recommends that three additional monitoring events be conducted at the site to verify groundwater analytical results. All six monitoring wells should be purged and sampled for VOCs, PAHs and TRPH as in the initial round of sampling.

Due to on-going construction activities of the seawall and its close proximity to the site, top of casing (TOC) elevations could not be obtained and aquifer characteristics could not be evaluated. It is recommended that during the next monitoring event, TOC elevations and groundwater levels be obtained from the all monitoring wells to determine the groundwater flow direction and water table gradient at the site. This data along with slug test data collected on Boca Chica Key can be used to estimate the hydraulic conductivity and transmissivity for the shallow surficial aquifer. Groundwater flow velocity at the site can also be calculated by estimates from the hydraulic conductivity and gradient data. In addition, an estimate of the tidal fluctuation at the site should be obtained during this event.



## **1.0 SITE DESCRIPTION AND BACKGROUND INFORMATION**

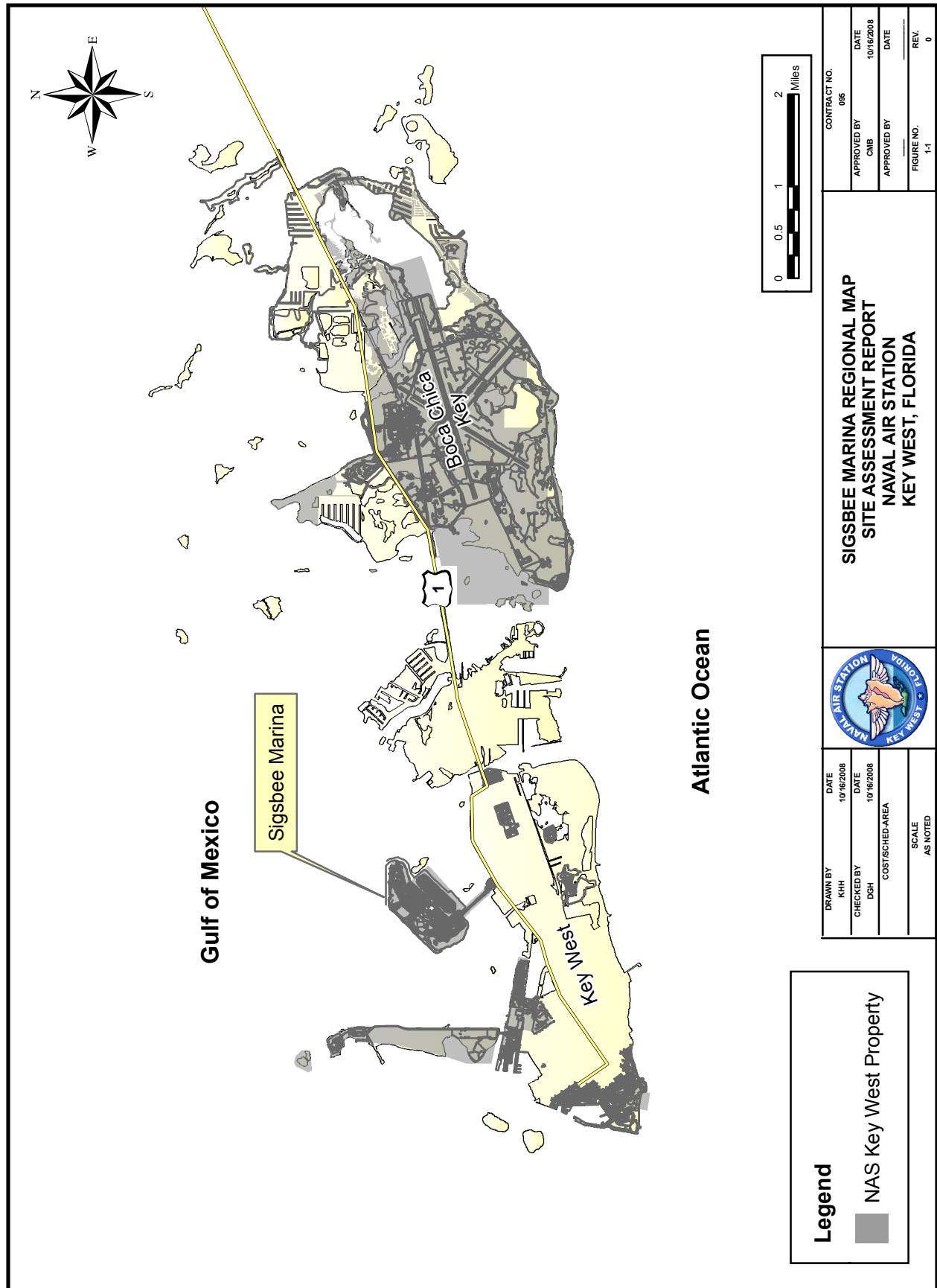
TtNUS under contract with NAVFAC SE, is submitting this SAR documenting the findings of the site assessment performed at the Sigsbee Marina at Naval Air Station (NAS) Key West, Florida. This Site Assessment Report (SAR) was prepared on behalf of the Navy under Contract No. N62467-04-D-0055, Contract Task Order (CTO) 0095, and summarizes the environmental assessment activities conducted by TtNUS.

### **1.1 SITE LOCATION AND CONDITIONS**

The site lies within Sections 28 and 29, Township 67 South, Range 25 East. Figure 1-1 shows the site location on the United States Geological Survey (USGS) topographic quadrangle map. Sigsbee Marina is located on Dredgers Key (commonly referred to as "Sigsbee" Key) within the Key West Naval Air Station, Key West, Monroe County, Florida (Figure 1-2). The Marina is currently an operating marina serving military personnel. The topography of the site is relatively flat and is composed mostly of fill material with some areas containing mangroves. The marina forms a small cove which is open to Florida Bay.

### **1.2 SITE HISTORY**

On January 25, 2007 petroleum hydrocarbons were found following a fuel leak at the south end of the pump island. Professional Service Industries (PSI) performed a brief assessment of the extent of petroleum-impacted soil and groundwater and then removed and disposed of approximately 1.4 cubic yards of contaminated soil. Soil vapor screening and soil sampling from the excavation walls confirmed the completeness of the source removal activities (PSI 2007). PSI also installed a groundwater test pit while removing these contaminated soils. Within approximately 2 hours of removing free product, the test pit had recharged with groundwater containing heavy aromatic (degraded and apparently well-aged) fuels on top. The test pit was filled because visual evidence indicated the remaining free product was from historical releases rather than a recent release.







## **2.0 SITE ASSESSMENT METHODOLOGY**

Site assessment activities were carried out at Sigsbee Marina in February and May 2008. Initially, a DPT investigation was conducted between February 20 and 21, 2008 to define the horizontal and vertical extent of contamination at the site. The DPT borings were installed around the pump islands and concentrically outward to assess the extent of soil and groundwater contamination. Soil samples were collected during this investigation for headspace screening and laboratory analysis. Groundwater samples were also collected for screening during the DPT event for laboratory analysis. After the results of the initial investigation were evaluated, monitoring wells were installed at the site between May 7 and 8, 2008. Groundwater samples were collected for off-site laboratory analysis on May 12, 2008. The results of the site assessment are discussed in Sections 3.0 and 4.0.

### **2.1 QUALITY ASSURANCE**

The site assessment investigation was conducted in accordance with the Standard Operating Procedures (SOPs) prescribed by the Florida Department of Environmental Protection (FDEP) (DEP-SOP-001/01). Equipment used to advance the soil borings, install monitoring wells, and collect soil or groundwater samples was decontaminated prior to and following each use. Organic vapor measurements were made with a MiniRae 2000 Photo Ionization Detector (PID). Prior to each day's activities, the PID was field calibrated in accordance with manufacturer directions.

Groundwater screening and monitoring well samples were collected in pre-preserved containers obtained from Accutest Laboratories, Orlando, Florida. Quality control samples (i.e., duplicates, equipment blanks, and trip blanks) were prepared and submitted to the laboratory. Sampling activities were documented in a site-specific field logbook; samples were transmitted under chain-of-custody protocols to the laboratory.

### **2.2 DPT INVESTIGATION**

The soil screening investigation was conducted at Sigsbee Marina to evaluate the extent to which petroleum, previously detected in samples, had contaminated site soils. The investigation was conducted by installing a total of twenty-two soil borings (SB-1 through SB-22), using DPT (Figure 2-1). Soil samples from the borings were collected for headspace screening with a PID. During the DPT field investigation, each soil boring was advanced below the water table in order to collect groundwater samples for laboratory analysis. Groundwater screening activities are discussed in Section 2.5.1.

#### **2.2.1 Soil Core Sampling**

Soil borings for the preliminary assessment were advanced using DPT. The borings were installed by a Geoprobe 6620DT drill rig. A 2-inch diameter 5-foot core barrel lined with a polypropylene sleeve was used

to collect the soil cores from discrete depths. Oolitic limestone was encountered in the soil borings. Groundwater was typically encountered at approximately 5 feet bls. The soil borings were advanced approximately 6 feet into the subsurface to an approximate total depth of 6 feet. The site geologist logged the soil properties, including texture, color, and soil moisture for each soil core and noted whether staining or odors were present. Soil boring logs are provided in Appendix A.

### **2.2.2      Soil Headspace Screening**

Soil samples were collected at the 0-2, 2-4, and 4-6 foot intervals from each location for headspace screening in accordance with the procedures outlined in Section 62-770.200, FAC. At one location, SB-21, the boring was advanced to 8 feet and a soil sample collected from the 6-8 foot sample. From each interval, two 16-ounce glass jars were half-filled with the soil sample, sealed with aluminum foil, and labeled. The soil samples were allowed to equilibrate to ambient air temperature. The PID response to total headspace organic vapors was measured by inserting the PID probe through the foil sample cover and recording the highest instrument reading.

### **2.2.3      DPT Groundwater Screening**

During site assessment activities, groundwater samples were collected from select borings advanced during the DPT screening investigation. Groundwater samples were collected from borings SB-02, 03, -07, -08, -09, -11 and -14. These borings were selected based on their elevated PID readings in the smear zone and their placement in a possible path of migration of contaminants.

The samples were collected by inserting a length of polyethylene (PE) tubing to the bottom of the well screen. The PE tubing was connected to a peristaltic pump and several screen volumes were removed from the temporary well to reduce the amount of suspended sediment in the groundwater samples. After sufficient purging, groundwater samples were collected by directing the peristaltic pump discharge directly into bottles provided by the laboratory.

Groundwater screening samples were packaged and shipped to Accutest Laboratories in Orlando, Florida for VOC, PAH and TRPH analyses.

## **2.3              SOIL SAMPLING PROGRAM**

Three soil samples were collected for fixed-base laboratory analysis to confirm results of the headspace screening. The soil samples were analyzed for VOCs by SW-846 Method 8260, PAHs by SW-846 Method 8310, and TRPH by the Florida Petroleum Residual Organics (FL-PRO) method. The validated analytical report is included in Appendix B.

## **2.4 GROUNDWATER SAMPLING PROGRAM**

Following the DPT investigation, five shallow (13-15 feet bls) monitoring wells and one deep (25 feet bls) monitoring well were installed at the site. These wells were used to collect groundwater samples.

### **2.4.1 Monitoring Well Locations**

Screening data obtained during the DPT investigation were evaluated to determine the optimum number and location for the wells (Figure 2-2).

### **2.4.2 Monitoring Well Installation**

The monitoring well borings were drilled with a truck-mounted drill rig and 4.25-inch inside diameter (ID) hollow-stem auger. Each well was constructed of 2-inch-ID, flush-threaded, schedule 40 polyvinyl chloride (PVC) riser, and 0.010-inch-slot well screen with a 6-inch point cap. Five shallow wells were installed to approximately 12 to 15 feet bls with a 10-foot screen. The deeper well was installed to a depth of 25 feet bls with a 5-foot screen. The annulus around each well was filled to approximately 1 foot above the top of the screen with U.S. Standard Sieve size 20/30 silica sand, followed by a 0.5 foot 30/65 fine sand seal. The remainder of the annulus was grouted to the surface. Each well was secured with a locking, watertight cap within a steel, 8-inch-diameter steel manhole. The manhole was set in a 24-inch-square concrete apron finished slightly above grade. A typical shallow well installation is illustrated on Figure 2-3. Monitoring well construction details are summarized in Table 2-1 and the monitoring well completion diagrams are provided in Appendix A.

### **2.4.3 Monitoring Well Development**

Each monitoring well was developed using a diaphragm or centrifugal pump. The wells were developed until the purge water became clear, typically when approximately 20 gallons had been removed.

### **2.4.4 Monitoring Well Sampling**

Samples were collected from site monitoring wells to evaluate groundwater quality in the shallow surficial aquifer. These samples were collected using the low-flow quiescent purging and sampling method. New Teflon® tubing was installed in each well for groundwater sampling. Approximately three to five well volumes were removed from each well using a peristaltic pump and Teflon® tubing. Temperature, pH, specific conductance, dissolved oxygen, and turbidity were monitored while the wells were purged. The field measurements, well purge volumes, and depths to groundwater were recorded during well purging and at the time of sample collection. Groundwater sample log sheets are provided in Appendix A.

Groundwater samples were analyzed for VOCs (SW-846 Method 8260), PAHs (SW-846 Method 8310), and TRPH (FL-PRO). The groundwater samples were placed on ice and shipped to Accutest Laboratories in Orlando, Florida, for analysis. Groundwater analytical validation reports are presented in Appendix B.

**TABLE 2-1**  
**MONITORING WELL CONSTRUCTION DETAILS**  
**SIGSBEE MARINA**  
**SITE ASSESSMENT REPORT**  
**NAVAL AIR STATION**  
**KEY WEST, FLORIDA**

<b>Well No.</b>	<b>Date Installed</b>	<b>Drilling Method</b>	<b>Total Well Depth (Feet)</b>	<b>Screened Interval (Feet bls)</b>	<b>Well Diameter (Inches)</b>	<b>Lithology of Screened Interval</b>
SM-MW-04	5/6/08	HSA	15	2-15	2	Oolitic limestone
SM-MW-05	5/6/08	HSA	15	2-15	2	Oolitic limestone
SM-MW-06	5/8/08	HSA	13	2-13	2	Oolitic limestone
SM-MW-07	5/7/08	HSA	13	2-13	2	Oolitic limestone
SM-MW-08	5/7/08	HSA	13	2-13	2	Oolitic limestone
SM-MW-09D	5/7/08	HSA	25	20-25	2	Oolitic limestone

TOC elevations surveyed by Island Surveying in May 2004.

HSA Hollow-stem auger

TOC Top of casing

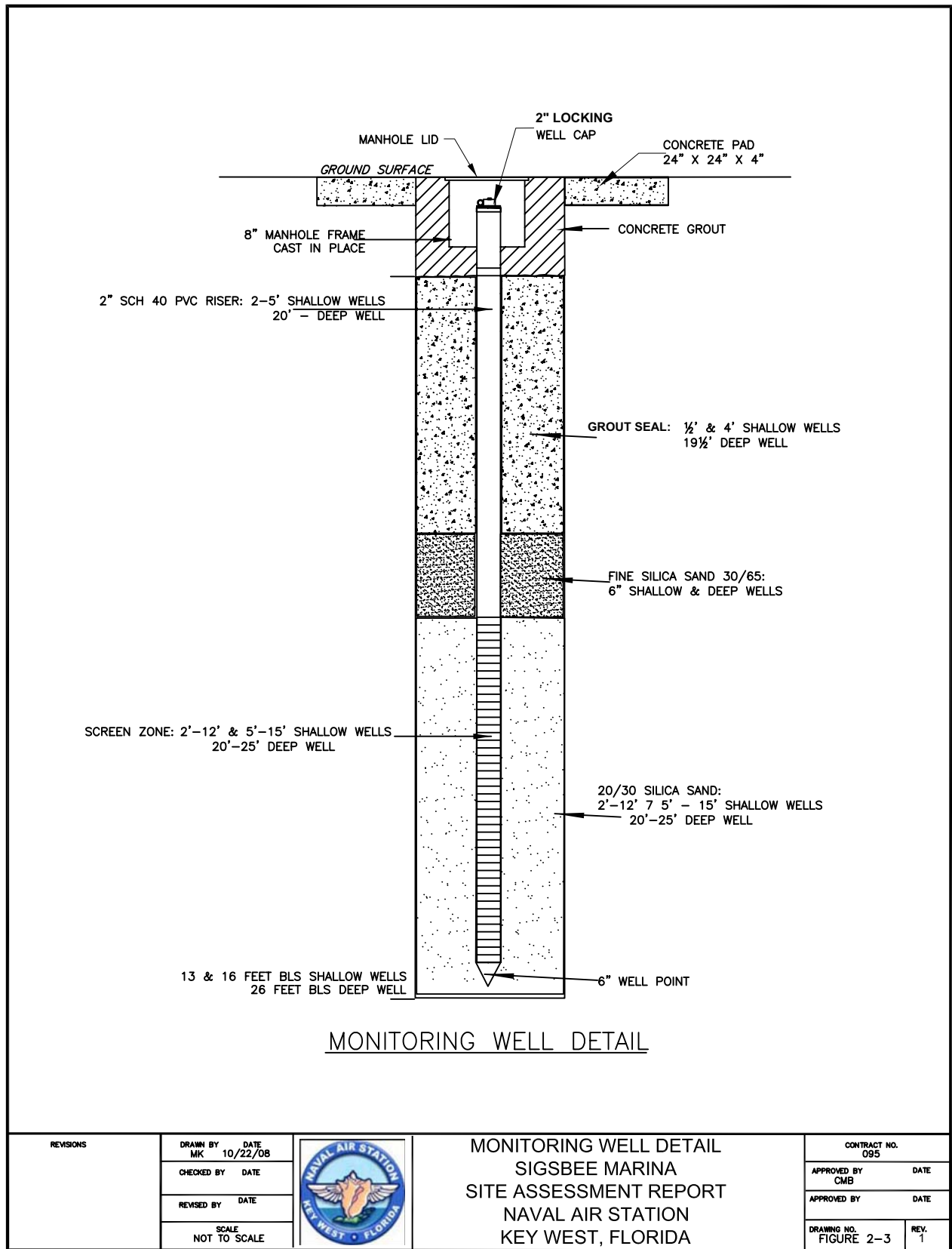
NA Not Applicable

bls Below land surface









### **3.0 GEOLOGY AND HYDROGEOLOGY**

Data collected during the site assessment were used to evaluate geologic and hydrogeologic conditions at the site that may influence the fate and transport of hydrocarbons released to the environment. Lithology and stratigraphy were described for the shallow surficial aquifer at the site.

The Lower Keys, which are within the southern geomorphic division of Florida, were formed during the Pleistocene Era. The Lower Keys are known as the "Oolitic Keys," a reference to the Oolitic Member of the Miami Limestone. The Oolitic Member consists of variably sandy, fossiliferous limestone composed primarily of ooids. The Oolitic Member is divided into two lithofacies: an ooid calcarenite and an oomoldic-recrystalline facies. The Key Largo Limestone underlies the Miami Limestone. The Key Largo Limestone is a light-gray to light-yellow coralline limestone comprised of coral heads encased in a matrix of calcarenite. In the Key West area, the Miami Limestone is approximately 27 feet thick and the Key Largo limestone is more than 270 feet thick [Brown & Root Environmental (B&RE), 1997].

The surficial aquifer system in the lower Keys is an unconfined, porous, highly permeable solution-riddled unit, as described above. Rainfall recharge seeps quickly into the ocean and saltwater intrusion is common. The water table ranges in depth from less than 1 foot to approximately 2.5 feet below mean sea level (msl) and fluctuates diurnally due to tidal effects. Water in the surficial aquifer is non-potable.

Dredgers Key is in the southeastern Coastal Plain physiographic province. Pleistocene marine reefs control the topography of the Coastal Plain in the Florida Keys [ABB Environmental Services, Inc. (ABB), 1995]. The topography of Dredgers Key is generally flat. Average land surface elevations are less than 5 feet above msl. Drainage on the Key is toward the Atlantic Ocean and Gulf of Mexico, which completely surround the Key.

#### **3.1 SITE STRATIGRAPHY**

Interpretation of site lithology and stratigraphy was based on visual examination of soil cores collected from soil borings during the DPT investigation and drill cuttings observed during the monitoring well installation.

The site surface was unpaved gravel, underlain by light-brown-to-beige-to-white, sandy, oolitic limestone. The vicinity of the pump island had approximately a foot of fill material comprised of coarse-grained, poorly sorted, moderately consolidated with pebbles, cobbles and shell fragments. The oolitic lithology extends to at least 25 feet bls, which was the maximum depth drilled during the investigation. Due to the homogeneity of the subsurface, no lithologic cross-section was constructed. Soil boring logs are included in Appendix A.

### **3.2 POTABLE WATER SUPPLY WELL SURVEY**

No freshwater public or registered domestic wells are in use on NAS Key West (ABB, 1995). Some residences in Key West have wells that withdraw water from the surficial aquifer for non-potable uses. The Florida Keys Aqueduct Authority (FKAA) operates and maintains the Florida Keys Aqueduct, which supplies potable water to all of the Keys. This water is drawn from wells near Florida City in southeastern Dade County. It is pumped 130 miles through a water main that parallels U.S. Highway 1 and terminates in Key West. The Monroe County Health Department recognizes the public water supply as the only potable water source available in Key West.

Alternative sources of potable water and non-potable water used in the Keys include private cisterns, private wells utilizing reverse osmosis, home desalination systems, and bottled water. The number of people who may be using water from these alternative sources is unknown. The best estimate of the number of people using local groundwater for non-potable domestic purposes is less than 500.

### **3.3 SURFACE WATER**

The Marina is separated from the waters of Florida Bay by a retaining sea wall located along the length of the marina. The marina is situated in a protected cove formed by surrounding marsh and land areas. The open waters of the Florida Bay are located approximately 300 feet to the north.

## **4.0 SITE ASSESSMENT RESULTS**

Soil samples were collected at Sigsbee Marina for headspace screening and laboratory analysis. The headspace screening results collected from unsaturated samples were evaluated following the appropriate Section 62-770.200, FAC guidelines. Groundwater samples were collected at Sigsbee Marina during the groundwater assessment. The results of groundwater analyses were compared to the FDEP GCTLs, listed in Chapter 62-777, FAC Table I.

### **4.1 SOIL ASSESSMENT RESULTS**

#### **4.1.1 DPT Headspace Screening**

A DPT investigation was conducted to estimate the extent of petroleum-contaminated soil at the site. Vadose and smear zone soils were evaluated for headspace screening. A summary of soil PID screening results is presented in Table 4-1. Soil boring locations and vapor readings are depicted on Figure 4-1.

Soils with a significant headspace screening response ( $>10$  ppm ) were encountered only in the smear zone of 4-6 foot at four borings (SB-01, -02, -07, -11) advanced during the DPT investigation. All screening responses in the vadose zone were below 10 ppm (Figure 4-1).

#### **4.1.2 Laboratory Soil Sample Analysis**

During the DPT investigation, three soil samples were collected for analysis by a fixed-base laboratory. The samples were collected from locations SB-09, -15 and -21 as shown in Figure 4-1 and were analyzed for VOCS, PAH, and TRPH.

Contaminants were not detected above their respective SCTLs in any of the soil samples collected. Laboratory analytical reports can be found in Appendix B.

### **4.2 GROUNDWATER ASSESSMENT RESULTS**

#### **4.2.1 DPT Assessment**

Groundwater screening samples were collected during the DPT investigation in February 2008 from select borings (SB-02, -03, -07, -08, -09, -11 and -14). Results of the investigation are depicted on Figure 4-3. Groundwater samples were collected and analyzed for VOCs, PAH, and TRPH. Results are presented in Table 4-3. Petroleum contaminants were detected in several of the samples. An exceedance of naphthalene was detected in KWSM-DPT-02 at a concentration of  $16.6 \mu\text{g/L}$ , above its GCTL of  $14 \mu\text{g/L}$ . All other detections in the samples collected were below GCTLs.

#### **4.2.2      Monitoring Well Sampling**

Groundwater samples were collected from the six on-site monitoring wells (KWSMMW-04, -05, -06, -07 -08, and -09D) in May 2008 and analyzed at an off-site laboratory for VOCs, PAHs and TRPH. Figure 2-2 shows the six monitoring well locations. Detections are reported in Table 4-4. The validated analytical reports can be found in Appendix B.

During the May 2008 sampling event, the VOC compounds acrylonitrile, benzene, chloroform, chloromethane, ethylbenzene, toluene, total xylenes and MTBE were detected in Sigsbee Marina monitoring wells. MTBE was detected in KWSMMW-07 at 20.9 µg/L, above its GCTL of 20 µg/L. MTBE was detected in all wells sampled, with concentrations ranging from 6 µg/L to 12.8 µg/L. However levels were below GCTLs. Acrylonitrile was also detected above its GCTL of 0.06 µg/L at 2.2 µg/L in KWSMMW-08. It was not detected in any of the other wells sampled. All other detected VOC compounds were below their respective GCTLs.

The PAHs, 1-and 2- methylnaphthalene and naphthalene were detected in KWSMMW-08 and KWSMMW-09D, while fluorine, fluoranthene and phenanthrene were detected in KWSMMW-06. All PAH detections were below GCTLs and were relatively low. The highest concentration of a PAH compound, naphthalene, was detected in SMMW-08 at 1.2 µg/L. The GCTL of naphthalene is 14 µg/L.

TRPH was detected in five of the Sigsbee Marina monitoring wells and ranged in concentration from 201 µg/L in KWSMMW-09D to 429 µg/L in KWSMMW-07. All detected concentrations of TRPH were below the GCTL of 5,000 µg/L.

**TABLE 4-1**  
**SOIL HEADSPACE ANALYTICAL RESULTS**  
**SIGSBEE MARINA**  
**SUPPLEMENTAL SITE ASSESSMENT REPORT**  
**NAVAL AIR STATION**  
**KEY WEST, FLORIDA**  
**PAGE 1 OF 3**

LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (feet bls)	SAMPLE INTERVAL (feet bls)	PID READING (ppm)	COMMENTS
SB-01	2/20/08	5	0-2	0	
SB-01	2/20/08	5	2-4	0	
SB-01	2/20/08	5	4-6	28.9	Strong petroleum odor
SB-02	2/20/08	5	0-2	0	
SB-02	2/20/08	5	2-4	0	
SB-02	2/20/08	5	4-6	750	Strong petroleum odor
SB-03	2/20/08	5	0-2	0	
SB-03	2/20/08	5	2-4	0	
SB-03	2/20/08	5	4-6	18.5	Petroleum odor
SB-04	2/20/08	5	0-2	0	
SB-04	2/20/08	5	2-4	0	
SB-04	2/20/08	5	4-6	0	
SB-05	2/20/08	5	0-2	0	
SB-05	2/20/08	5	2-4	0	
SB-05	2/20/08	5	4-6	0	
SB-06	2/20/08	5	0-2	0	
SB-06	2/20/08	5	2-4	0	
SB-06	2/20/08	5	4-6	0	
SB-07	2/20/08	5	0-2	0	
SB-07	2/20/08	5	2-4	0	
SB-07	2/20/08	5	4-6	169	Strong petroleum odor
SB-08	2/20/08	5	0-2	0	
SB-08	2/20/08	5	2-4	0	
SB-08	2/20/08	5	4-6	8.2	Petroleum odor
SB-09	2/20/08	5	0-2	0	
SB-09	2/20/08	5	2-4	0	
SB-09	2/20/08	5	4-6	9.2	Petroleum odor
SB-10	2/20/08	5	0-2	0	
SB-10	2/20/08	5	2-4	0	
SB-10	2/20/08	5	4-6	0	



**TABLE 4-1**  
**SOIL HEADSPACE ANALYTICAL RESULTS**  
**FEBRUARY 2008**  
**SIGSBEE MARINA**  
**SUPPLEMENTAL SITE ASSESSMENT REPORT**  
**NAVAL AIR STATION**  
**KEY WEST, FLORIDA**  
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LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (feet bls)	SAMPLE INTERVAL (feet bls)	PID READING (ppm)	COMMENTS
SB-11	2/20/08	5	0-2	0	
SB-11	2/20/08	5	2-4	0	
SB-11	2/20/08	5	4-6	151	Petroleum odor
SB-12	2/21/08	5	0-2	0	
SB-12	2/21/08	5	2-4	0	
SB-12	2/21/08	5	4-6	0	
SB-13	2/21/08	5	0-2	0	
SB-13	2/21/08	5	2-4	0	
SB-13	2/21/08	5	4-6	0	
SB-14	2/21/08	5	0-2	0	
SB-14	2/21/08	5	2-4	0	
SB-14	2/21/08	5	4-6	0	
SB-15	2/21/08	5	0-2	0	
SB-15	2/21/08	5	2-4	0	
SB-15	2/21/08	5	4-6	0	
SB-16	2/21/08	5	0-2	0	
SB-16	2/21/08	5	2-4	0	
SB-16	2/21/08	5	4-6	0	
SB-17	2/21/08	5	0-2	0	
SB-17	2/21/08	5	2-4	0	
SB-17	2/21/08	5	4-6	0	
SB-18	2/21/08	5	0-2	0	
SB-18	2/21/08	5	2-4	0	
SB-18	2/21/08	5	4-6	0	
SB-19	2/21/08	5	0-2	0	
SB-19	2/21/08	5	2-4	0	
SB-19	2/21/08	5	4-6	0	
SB-20	2/21/08	5	0-2	0	
SB-20	2/21/08	5	2-4	0	
SB-20	2/21/08	5	4-6	0.3	

**TABLE 4-1**  
**SOIL HEADSPACE ANALYTICAL RESULTS**  
**FEBRUARY 2008**  
**SIGSBEE MARINA**  
**SUPPLEMENTAL SITE ASSESSMENT REPORT**  
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LOCATION NO.	DATE COLLECTED	DEPTH TO WATER (feet bls)	SAMPLE INTERVAL (feet bls)	PID READING (ppm)	COMMENTS
SB-21	2/21/08	5	0-2	0	
SB-21	2/21/08	5	2-4	0	
SB-21	2/21/08	5	4-6	0	
SB-21	2/21/08	5	6-8	0	
SB-22	2/21/08	5	0-2	0	
SB-22	2/21/08	5	2-4	0	
SB-22	2/21/08	5	4-6	0	

Notes: bls = Below land surface  
ppm = Parts per million  
NS = Not sampled

**TABLE 4-2**  
**GROUNDWATER DPT SCREENING**  
**ANALYTICAL RESULTS, FEBRUARY 2008**  
**SIGSBEE MARINA**  
**SITE ASSESSMENT REPORT**  
**NAVAL AIR STATION**  
**KEY WEST, FLORIDA**  
**PAGE 1 OF 2**

LOCATION ID	PARAMETER	RESULT	GCTL	QUAL <sup>(a)</sup>	UNIT
KWSM-DPT-02	1-METHYLNAPHTHALENE	12.9	28		µg/L
KWSM-DPT-02	2-METHYLNAPHTHALENE	8.6	28		µg/L
KWSM-DPT-02	BENZENE	0.33	1	J	µg/L
KWSM-DPT-02	ETHYLBENZENE	2.8	700		µg/L
KWSM-DPT-02	FLUORENE	0.27	280	J	µg/L
KWSM-DPT-02	METHYL TERTIARY-BUTYL ETHER	1.4	20		µg/L
KWSM-DPT-02	NAPHTHALENE	16.6	14		µg/L
KWSM-DPT-02	TOTAL XYLENES	33.6	10000		µg/L
KWSM-DPT-02	TRPH (C08-C40)	1.35	5		mg/L
KWSM-DPT-03	METHYL TERT-BUTYL ETHER	0.8	20	J	µg/L
KWSM-DPT-07-AVG	1-METHYLNAPHTHALENE	1.5	28		µg/L
KWSM-DPT-07-AVG	2-METHYLNAPHTHALENE	0.36	28	J	µg/L
KWSM-DPT-07-AVG	BENZENE	0.63	1	J	µg/L
KWSM-DPT-07-AVG	ETHYLBENZENE	3.9	700		µg/L
KWSM-DPT-07-AVG	METHYL TERTIARY-BUTYL ETHER	4	20		µg/L
KWSM-DPT-07-AVG	NAPHTHALENE	0.61	14	J	µg/L
KWSM-DPT-07-AVG	TOLUENE	0.4	1000	J	µg/L
KWSM-DPT-07-AVG	TOTAL XYLENES	12.2	10000		µg/L
KWSM-DPT-07-AVG	1-METHYLNAPHTHALENE	1.6	28		µg/L
KWSM-DPT-07-AVG	2-METHYLNAPHTHALENE	0.355	28	J	µg/L
KWSM-DPT-07-AVG	BENZENE	0.645	1	J	µg/L
KWSM-DPT-07-AVG	ETHYLBENZENE	3.85	700		µg/L
KWSM-DPT-07-AVG	METHYL TERTIARY-BUTYL ETHER	4.05	20		µg/L
KWSM-DPT-07-AVG	NAPHTHALENE	0.61	14	J	µg/L
KWSM-DPT-07-AVG	TOLUENE	0.38	1000	J	µg/L
KWSM-DPT-07-AVG	TOTAL XYLENES	12.35	10000		µg/L
KWSM-DPT-07-AVG	1-METHYLNAPHTHALENE	1.7	28		µg/L
KWSM-DPT-07-AVG	2-METHYLNAPHTHALENE	0.35	28	J	µg/L
KWSM-DPT-07-AVG	BENZENE	0.66	1	J	µg/L
KWSM-DPT-07-AVG	ETHYLBENZENE	3.8	700		µg/L
KWSM-DPT-07-AVG	METHYL TERTIARY-BUTYL ETHER	4.1	20		µg/L
KWSM-DPT-07-AVG	NAPHTHALENE	0.61	14	J	µg/L
KWSM-DPT-07-AVG	TOLUENE	0.36	1000	J	µg/L
KWSM-DPT-07-AVG	TOTAL XYLENES	12.5	10000		µg/L
KWSM-DPT-08	1-METHYLNAPHTHALENE	0.46	28	J	µg/L
KWSM-DPT-08	ETHYLBENZENE	3.2	700		µg/L
KWSM-DPT-08	METHYL TERTIARY-BUTYL ETHER	8.8	20		µg/L
KWSM-DPT-08	NAPHTHALENE	0.71	14	J	µg/L

**TABLE 4-2**  
**GROUNDWATER DPT SCREENING**  
**ANALYTICAL RESULTS, FEBRUARY 2008**  
**SIGSBEE MARINA**  
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LOCATION ID	PARAMETER	RESULT	GCTL	QUAL <sup>(b)</sup>	UNIT
KWSM-DPT-08	TOTAL XYLENES	5.7	10000		µg/L
KWSM-DPT-09	METHYL TERTIARY-BUTYL ETHER	0.51	20	J	µg/L
KWSM-DPT-11	1-METHYLNAPHTHALENE	2.1	28		µg/L
KWSM-DPT-11	2-METHYLNAPHTHALENE	1.9	28		µg/L
KWSM-DPT-11	ETHYLBENZENE	7.9	700		µg/L
KWSM-DPT-11	METHYL TERTIARY-BUTYL ETHER	15.1	20		µg/L
KWSM-DPT-11	NAPHTHALENE	3.7	14		µg/L
KWSM-DPT-11	TOTAL XYLENES	46.6	10000		µg/L
KWSM-DPT-11	TRPH (C08-C40)	0.212	5	J	mg/L
KWSM-DPT-14	METHYL TERTIARY-BUTYL ETHER	6.2	20		µg/L

- (a) Shading indicates a concentration in excess of GCTLs
- (b) Qualifier (Qual.) Codes:  
J – The result is an estimated quantity
- (c) The notation “-AVG” indicates that duplicate samples were collected. The duplicate results were averaged for the final result.

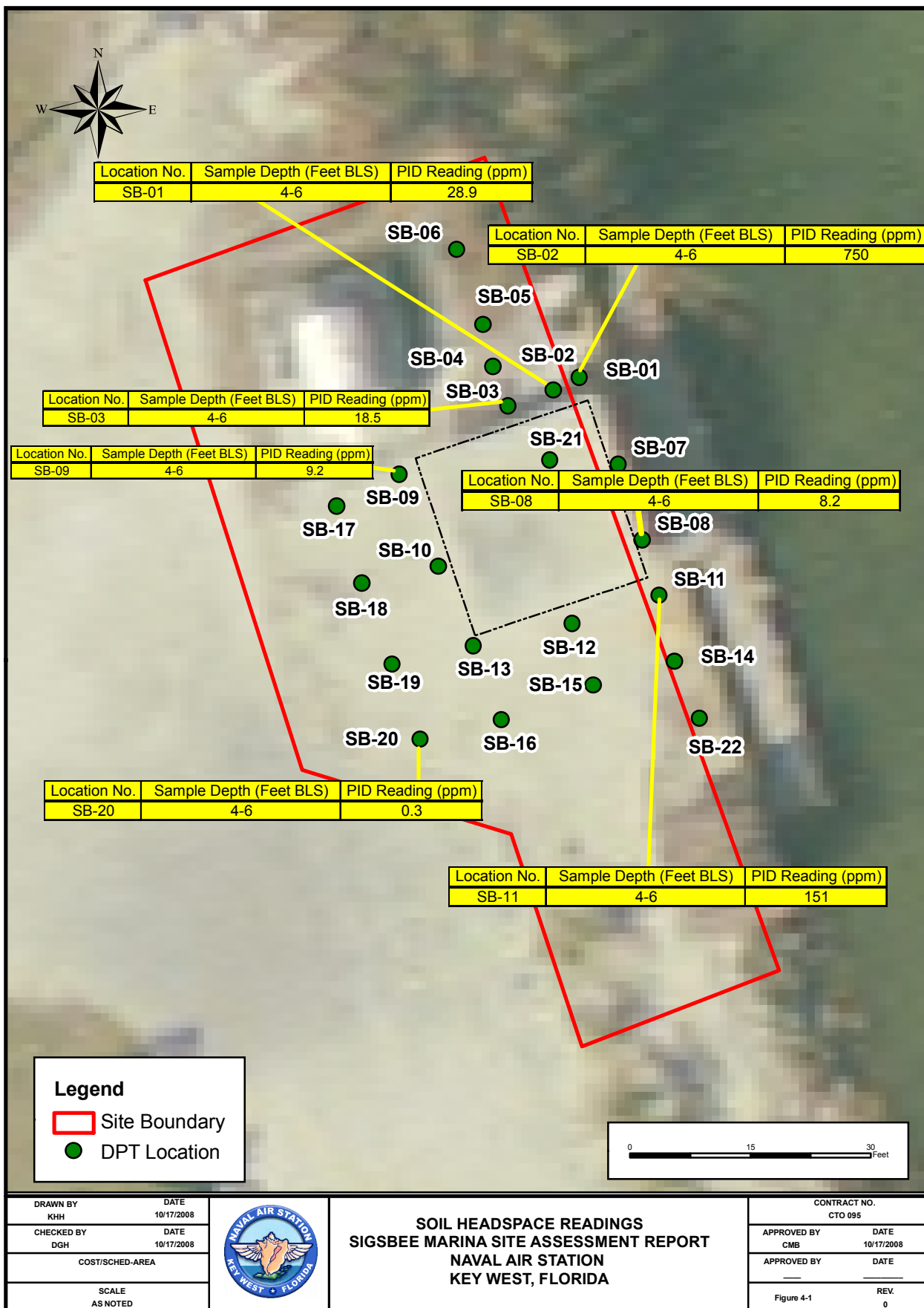
**TABLE 4-3**  
**GROUNDWATER MONITORING WELLS**  
**ANALYTICAL RESULTS, MAY 2008**  
**SIGSBEE MARINA**  
**SITE ASSESSMENT REPORT**  
**NAVAL AIR STATION**  
**KEY WEST, FLORIDA**  
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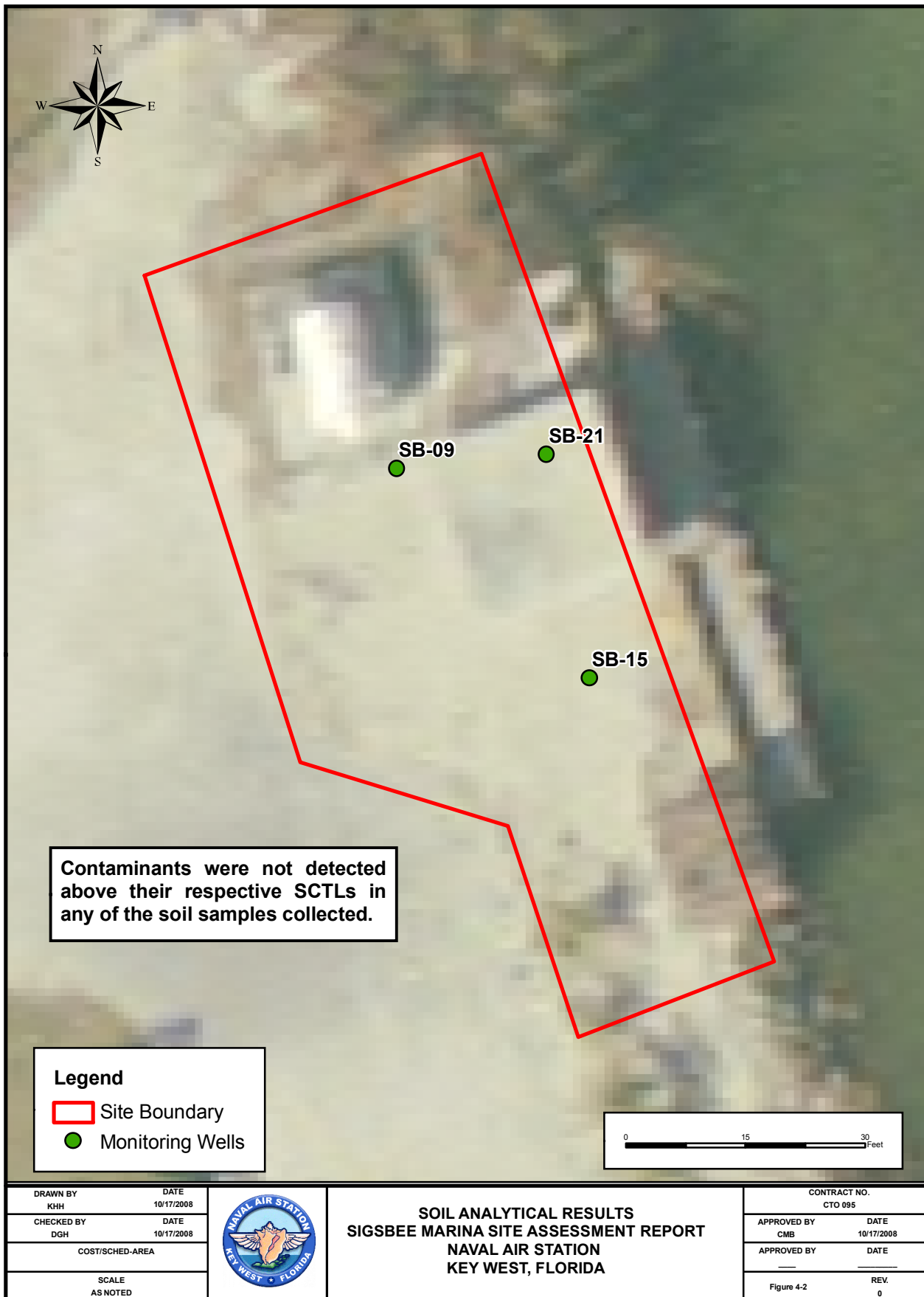
LOCATION ID	PARAMETER	RESULT	GCTL	QUAL(a)	UNIT
KWSM-MW-04	BENZENE	0.28	1	J	µg/L
KWSM-MW-04	CHLOROFORM	0.39	70	J	µg/L
KWSM-MW-04	METHYL TERTIARY-BUTYL ETHER	6	20		µg/L
KWSM-MW-04	TOLUENE	0.41	1000	J	µg/L
KWSM-MW-05	BENZENE	0.27	1	J	µg/L
KWSM-MW-05	CHLOROFORM	0.25	70	J	µg/L
KWSM-MW-05	ETHYLBENZENE	0.42	700	J	µg/L
KWSM-MW-05	METHYL TERTIARY-BUTYL ETHER	6.6	20		µg/L
KWSM-MW-05	TOLUENE	0.34	1000	J	µg/L
KWSM-MW-05	TOTAL XYLENES	0.66	10000	J	µg/L
KWSM-MW-05	TRPH (C08-C40)	0.223	5	J	mg/L
KWSM-MW-06	FLUORANTHENE	0.34	280	J	µg/L
KWSM-MW-06	FLUORENE	0.26	280	J	µg/L
KWSM-MW-06	METHYL TERTIARY-BUTYL ETHER	12.8	20		µg/L
KWSM-MW-06	PHENANTHRENE	0.82	210	J	µg/L
KWSM-MW-06	TOLUENE	0.3	1000	J	µg/L
KWSM-MW-07	CHLOROMETHANE	2.1	2.7		µg/L
KWSM-MW-07	METHYL TERTIARY-BUTYL ETHER	20.9	20		µg/L
KWSM-MW-07	TOLUENE	0.79	1000	J	µg/L
KWSM-MW-07	TRPH (C08-C40)	0.429	5		mg/L
KWSM-MW-08	1-METHYLNAPHTHALENE	0.58	28	J	µg/L
KWSM-MW-08	2-METHYLNAPHTHALENE	0.63	28	J	µg/L
KWSM-MW-08	ACRYLONITRILE	2.2	0.06	J	µg/L
KWSM-MW-08	CHLOROFORM	1.2	70		µg/L
KWSM-MW-08	ETHYLBENZENE	4.1	700	J	µg/L
KWSM-MW-08	METHYL TERTIARY-BUTYL ETHER	8.5	20		µg/L
KWSM-MW-08	NAPHTHALENE	1.2	14		µg/L
KWSM-MW-08	TOLUENE	0.6	1000	J	µg/L
KWSM-MW-08	TOTAL XYLENES	16.6	10000		µg/L
KWSM-MW-08	TRPH (C08-C40)	0.325	5		mg/L
KWSM-MW-08	1-METHYLNAPHTHALENE	0.575	28	J	µg/L
KWSM-MW-08	2-METHYLNAPHTHALENE	0.63	28	J	µg/L
KWSM-MW-08	ACRYLONITRILE	1.6	0.06	J	µg/L
KWSM-MW-08	CHLOROFORM	1.1	70		µg/L
KWSM-MW-08	ETHYLBENZENE	3.45	700	J	µg/L
KWSM-MW-08	METHYL TERTIARY-BUTYL ETHER	8.35	20		µg/L
KWSM-MW-08	NAPHTHALENE	1.15	14		µg/L
KWSM-MW-08	TOLUENE	0.575	1000	J	µg/L

**TABLE 4-3**  
**GROUNDWATER MONITORING WELLS**  
**ANALYTICAL RESULTS, MAY 2008**  
**SIGSBEE MARINA**  
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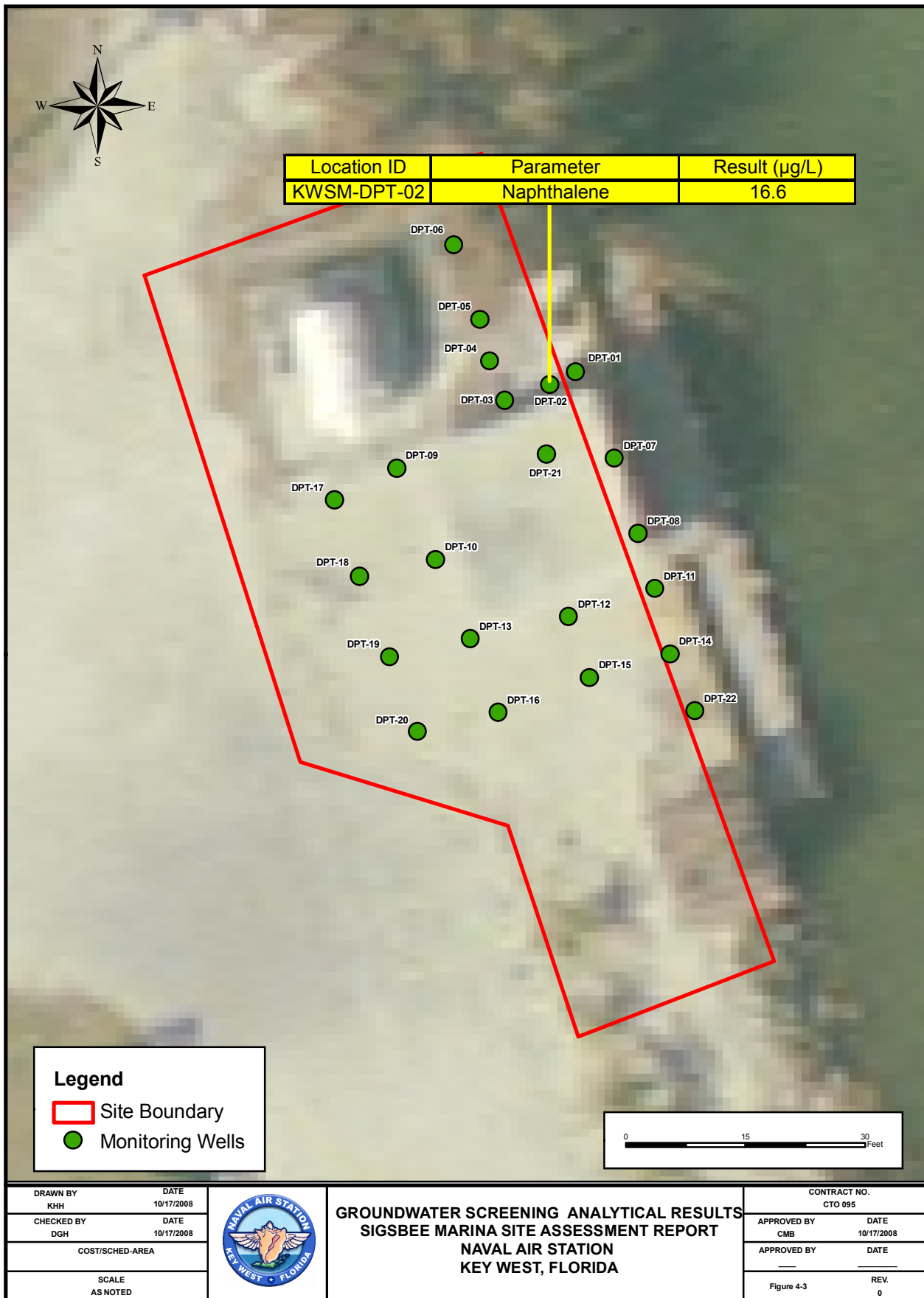
LOCATION ID	PARAMETER	RESULT	GCTL	QUAL(a)	UNIT
KWSM-MW-08	TOTAL XYLENES	14.65	10000		µg/L
KWSM-MW-08	TRPH (C08-C40)	0.307	5		mg/L
KWSM-MW-08	1-METHYLNAPHTHALENE	0.57	28	J	µg/L
KWSM-MW-08	2-METHYLNAPHTHALENE	0.63	28	J	µg/L
KWSM-MW-08	CHLOROFORM	1	70		µg/L
KWSM-MW-08	ETHYLBENZENE	2.8	700	J	µg/L
KWSM-MW-08	METHYL TERTIARY-BUTYL ETHER	8.2	20		µg/L
KWSM-MW-08	NAPHTHALENE	1.1	14		µg/L
KWSM-MW-08	TOLUENE	0.55	1000	J	µg/L
KWSM-MW-08	TOTAL XYLENES	12.7	10000		µg/L
KWSM-MW-08	TRPH (C08-C40)	0.289	5		mg/L
KWSM-MW-09D	1-METHYLNAPHTHALENE	0.41	28	J	µg/L
KWSM-MW-09D	2-METHYLNAPHTHALENE	0.68	28	J	µg/L
KWSM-MW-09D	BENZENE	0.49	1	J	µg/L
KWSM-MW-09D	CHLOROFORM	0.47	70	J	µg/L
KWSM-MW-09D	ETHYLBENZENE	4.4	700		µg/L
KWSM-MW-09D	METHYL TERTIARY-BUTYL ETHER	3.1	20		µg/L
KWSM-MW-09D	NAPHTHALENE	1.1	14		µg/L
KWSM-MW-09D	TOLUENE	2.9	1000		µg/L
KWSM-MW-09D	TOTAL XYLENES	26	10000		µg/L
KWSM-MW-09D	TRPH (C08-C40)	0.201	5	J	mg/L

\* Duplicate sample collected at KWSM-MW-08. Results were averaged.  
GCTL as defined in FAC 62-777, Table I.











## **5.0 SITE INVESTIGATION SUMMARY**

The significant findings from each phase of site assessment activities are discussed below.

### **5.1 SOURCE OF HYDROCARBONS**

A fuel leak at the south end of the pump island resulted in a discharge product to the subsurface in January 2007. A limited site assessment of area was conducted and approximately 1.4 cubic yards of petroleum impacted soil was removed. Soil vapor screening and soil sampling of the excavation walls confirmed the removal of petroleum impacted soil from the vicinity of the leak. During soil removal, a test pit was also installed to collect any free product discharged to the groundwater. Within approximately 2 hours of removing free product the test pit had recharged with groundwater containing heavy aromatic fuels on the surface. This remaining free product was attributed to historical releases not associated with the January 2007 release.

### **5.2 SITE CONDITIONS**

The site is underlain by oolitic limestone to approximately 25 feet bls. Lithologies suggesting the presence of confining layers were not observed at the site. No active potable water supply or irrigation wells occur on Fleming Key.

### **5.3 SOIL ASSESSMENT**

Headspace analysis of vadose zone soil samples collected during the investigation did not indicate "excessively contaminated soil" for petroleum constituents, as defined in Chapter 62-770, F.A.C. Furthermore, VOC, PAHs, and TRPH contaminants were not detected above SCTLs in the soil samples collected for fixed-base laboratory analysis.

### **5.4 GROUNDWATER ASSESSMENT**

A slight exceedance of naphthalene was detected in the sample collected from DPT boring KWSM-DPT-02. All other detections during the DPT assessment were below GCTLs. In addition, slight exceedances of the VOCs acrylonitrile and MTBE above GCTLs occurred in monitoring wells KWSMMW-07 and -08 respectively. PAH constituents and TRPH were found in the monitoring well samples, however all detected concentrations were below GCTLs.

The horizontal extent of contamination from the reported line leak is defined to the south by monitoring wells KWSMMW-04 and -05 and to the west by KWSMMW-06. The retaining wall and waters of Florida Bay occur to the east. Monitoring well KWSMMW-07 did not have significant concentrations of petroleum contaminants and defined the extent to the north. The vertical extent of contamination was defined by

KWSMMW-09D, which was screened at a depth of 20-25 feet. Petroleum contaminants were not detected above GCTLs in the groundwater sample collected from the well.

## 6.0 CONCLUSIONS AND RECOMMENDATION

The conclusions, based on the data collected during the site assessment performed by TtNUS at the Sigsbee Marina, are summarized as follows:

- The site is underlain by a surficial aquifer comprised of oolitic limestone. No confining layers were encountered within the upper 25 feet of the surficial aquifer.
- Headspace analysis was conducted in the 0-to-6-foot zone nearest to the surface. No vadose zone samples produced PID readings indicating the presence of “excessively contaminated soil.”
- The surficial aquifer is non-potable and is assumed to be tidally influenced in the site vicinity.
- Contaminated soil has previously been excavated and removed where feasible, and no free product occurred at the site during assessment activities.
- The vertical and horizontal extent of contamination has been defined by the investigation.
- Minor exceedances of the VOCs MTBE and acrylonitrile were detected in groundwater samples
- Based on the data presented in this SAR, and supported by the criteria cited in Chapter 62-770, FAC, it is recommended that two additional groundwater sampling events be conducted at the site. All six monitoring wells should be purged and sampled for VOCs, PAHs and TRPH as in the initial round of sampling. Results of the sampling events will determine if the site qualifies for NFA or if further MNA is required. It is also recommended that the surficial aquifer characteristics be investigated during the next sampling event.

## REFERENCES

EPA (United States Environmental Protection Agency). 1991. Management of Investigation-Derived Waste During Site Inspections. DER Directive 9345.3.02.

FDEP (Florida Department of Environmental Protection). 2002. SOPs for Field Activities, DEP-SOP-001/01. Tallahassee, Florida, January.

PSI (Professional Service Industries, Inc.). 2007. Source Removal Report for Sigsbee Marina, Key West Naval Air Station. Miami, Florida, March.

TtNUS. 2002. Florida Regional Quality Assurance Program Manual. Tallahassee, Florida, October.

**APPENDIX A**  
**FIELD LOG FORMS**

## BORING LOG

PROJECT NAME:

PROJECT NUMBER:

DRILLING COMPANY:

DRILLING RIG:

BORING No.:

DATE:

GEOLOGIST:

DRILLER:

[illegible]

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area  
Background (ppm):

Converted to Well:      Yes      ☒      No

Well I.D. #: KWSM MW-04



# BORING LOG

PROJECT NAME:

PROJECT NUMBER:

DRILLING COMPANY:

DRILLING RIG:

BORING No.:

DATE:

GEOLOGIST:

DRILLER:

[illegible]

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

### Drilling Area

Background (ppm):

Converted to Well:

Yes

No

Well I.D. #:

KWSMMW-05

# BORING LOG

PROJECT NAME: Sigbee Marine  
PROJECT NUMBER: CTO-095  
DRILLING COMPANY: GP1  
DRILLING RIG: B-57


BORING NO.: MW-06  
DATE: 5/8/08  
GEOLOGIST: GB  
DRILLER: Billy Moss

[illegible]

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area  
Background (ppm): 

Converted to Well: Yes ☒ No ☐ Well I.D. #: KWSMKW-06

## BORING LOG

PROJECT NAME:

PROJECT NUMBER:

DRILLING COMPANY:

DRILLING RIG:

BORING No.:

DATE:

GEOLOGIST:

DRILLER:

[illegible]

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area  
Background (ppm):

Converted to Well: Yes X No        Well I.D. #: KN5WML-07

## BORING LOG

PROJECT NAME: Sigsbee Marine  
PROJECT NUMBER: OTO-095  
DRILLING COMPANY: GPI  
DRILLING RIG: B-57

BORING No.: NW-08  
DATE: 5/7/08  
GEOLOGIST: RB  
DRILLER: Billie Mae

[illegible]

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area  
Background (ppm): 0

Converted to Well: Yes ☒ No ☐ Well I.D. #: KWT444W-05



Tetra Tech NUS, Inc.

Page 1 of 1**BORING LOG**

PROJECT NAME:

PROJECT NUMBER:

DRILLING COMPANY:

DRILLING RIG:

BORING No.:

DATE:

GEOLOGIST:

DRILLER:

Sample No. and Type or RQD	Depth (Ft.) or Run No.	Blows / 6" or RQD (%)	Sample Recovery / Sample Length	Lithology Change (Depth/Ft.) or Screened Interval	MATERIAL DESCRIPTION			U S C S *	Remarks	PID/FID Reading (ppm)			
					Soil Density/ Consistency or Rock Hardness	Color	Material Classification			Sample	Sampler BZ	Borehole**	Driller BZ**
							pebbles + boulders, coarse material - calcitic limestone, gray brown, moderately consolidated						
5										250	00	00	00
10										300	00	00	00
15										50	00	00	00
20										10	00	00	00
25										00	00	00	00

\* When rock coring, enter rock brokenness.

\*\* Include monitor reading in 6 foot intervals @ borehole. Increase reading frequency if elevated response read.

Remarks:

Drilling Area

Background (ppm): 0

Converted to Well:

Yes

No

Well I.D. #:

KWSMMW-09D



Tetra Tech NUS, Inc.

# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: KWSMMW-04

PROJECT <u>Spiggle Marine</u>	LOCATION <u>NW-04 Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>CSO-095</u>	BORING <u>MW-04</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/6/08</u>	DATE COMPLETED <u>5/6/08</u>	DEVELOPMENT METHOD <u>centrifugal</u>
FIELD GEOLOGIST <u>GB</u>		
GROUND ELEVATION <u>N/A</u>	DATUM	

ACAD: FORM\_MWFM.dwg 07/20/99 INL

FLUSH MOUNT  
SURFACE CASING  
WITH LOCK

ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Portland cement

TYPE OF PROTECTIVE CASING: 8" steel

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 8"

TYPE OF RISER PIPE: PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: bentonite/grout  
mud

ELEVATION/DEPTH TOP OF SEAL: 11.5

TYPE OF SEAL: fine sand 20/65

ELEVATION/DEPTH TOP OF SAND: 12

ELEVATION/DEPTH TOP OF SCREEN: 14

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 0.01 x 10 ft

TYPE OF SAND PACK: 20/30 silica  
sand

DIAMETER OF HOLE IN BEDROCK: N/A

ELEVATION / DEPTH BOTTOM OF SCREEN: 14

ELEVATION / DEPTH BOTTOM OF SAND: 14.5

ELEVATION/DEPTH BOTTOM OF HOLE: 14.5

BACKFILL MATERIAL BELOW SAND: 20/30 sand pack



Tetra Tech NUS, Inc.

# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: MW-05

PROJECT <u>Sigsbee Marina</u>	LOCATION <u>NAS Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>070-095</u>	BORING <u>MW05</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/6/08</u>	DATE COMPLETED <u>5/6/08</u>	DEVELOPMENT METHOD <u>artificial</u>
FIELD GEOLOGIST <u>GB</u>	DATUM	
GROUND ELEVATION <u>N/A</u>		

ACAD: FORM\_MWFM.dwg 07/20/99 INL

	ELEVATION TOP OF RISER:	<u>N/A</u>
	TYPE OF SURFACE SEAL:	<u>Portland Cement</u>
	TYPE OF PROTECTIVE CASING:	<u>steel mandrel</u>
	I.D. OF PROTECTIVE CASING:	<u>8"</u>
	DIAMETER OF HOLE:	<u>8"</u>
	TYPE OF RISER PIPE:	<u>PVC</u>
	RISER PIPE I.D.:	<u>2"</u>
	TYPE OF BACKFILL/SEAL:	<u>benlate/gout mix</u>
	ELEVATION/DEPTH TOP OF SEAL:	<u>1'5</u>
	TYPE OF SEAL:	<u>fine sand seal 30/45</u>
	ELEVATION/DEPTH TOP OF SAND:	<u>1'2</u>
	ELEVATION/DEPTH TOP OF SCREEN:	<u>1'4</u>
	TYPE OF SCREEN:	<u>PVC</u>
	SLOT SIZE x LENGTH:	<u>0.01 x 10 ft</u>
TYPE OF SAND PACK:	<u>20/30 silica sand</u>	
DIAMETER OF HOLE IN BEDROCK:	<u>N/A</u>	
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>1'14</u>	
ELEVATION / DEPTH BOTTOM OF SAND:	<u>1'14.5</u>	
ELEVATION/DEPTH BOTTOM OF HOLE:	<u>1'14.5</u>	
BACKFILL MATERIAL BELOW SAND:	<u>20/30 sand and</u>	



Tetra Tech NUS, Inc.

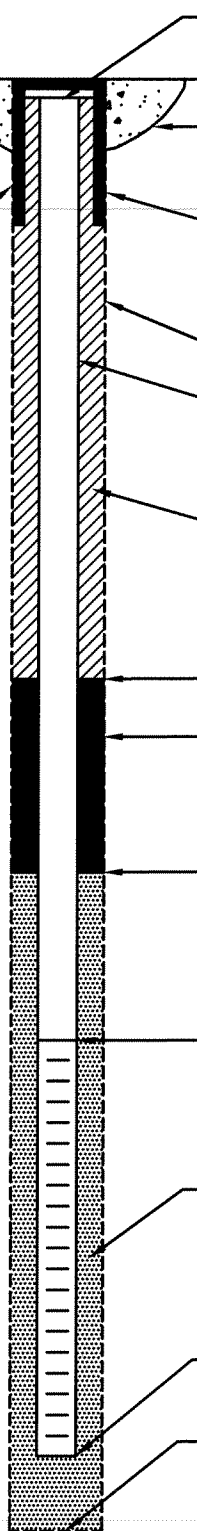
# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: MW-06

PROJECT <u>Sagehen Run</u>	LOCATION <u>NAS Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>0910-08</u>	BORING <u>MW-06</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/8/08</u>	DATE COMPLETED <u>5/8/08</u>	DEVELOPMENT METHOD <u>centrifugal</u>
FIELD GEOLOGIST <u>GB</u>		
GROUND ELEVATION _____	DATUM _____	

ACAD:FORM\_MWFM.dwg 07/20/99 INL

FLUSH MOUNT  
SURFACE CASING  
WITH LOCK



ELEVATION TOP OF RISER: N/A

TYPE OF SURFACE SEAL: Portland Cement

TYPE OF PROTECTIVE CASING: steel mandrel

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 8"

TYPE OF RISER PIPE: PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: bentonite/grout mix

ELEVATION/DEPTH TOP OF SEAL: 11

TYPE OF SEAL: 30/65 fine silica sand

ELEVATION/DEPTH TOP OF SAND: 12

ELEVATION/DEPTH TOP OF SCREEN: 13

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 0.01 x 10 ft

TYPE OF SAND PACK: 20/30 silica sand

DIAMETER OF HOLE IN BEDROCK: N/A

ELEVATION / DEPTH BOTTOM OF SCREEN: 13.20

ELEVATION / DEPTH BOTTOM OF SAND: 13.5

ELEVATION/DEPTH BOTTOM OF HOLE: 13.5

BACKFILL MATERIAL BELOW SAND: 13.5 20/30 sand





Tetra Tech NUS, Inc.

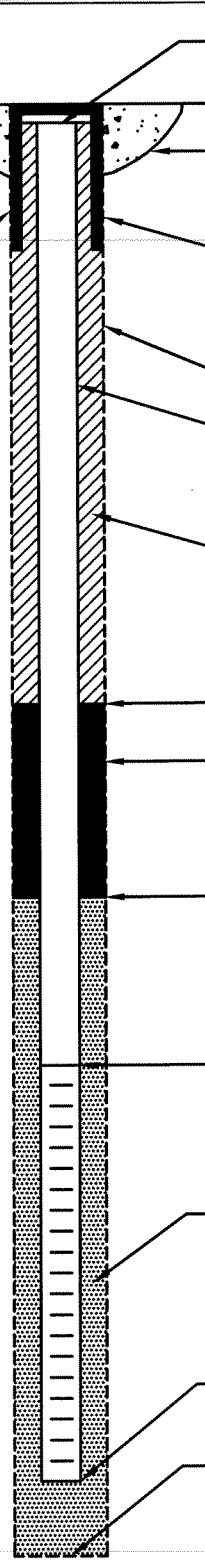
# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: MW-07

PROJECT <u>Sigsbee Marina</u>	LOCATION <u>NAS Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>CTO-095</u>	BORING <u>MW-07</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/7/08</u>	DATE COMPLETED <u>5/7/08</u>	DEVELOPMENT METHOD <u>Centrifugal</u>
FIELD GEOLOGIST <u>GB</u>	DATUM _____	
GROUND ELEVATION _____		

ACAD:FORM\_JMWF.dwg 07/20/99 INL

FLUSH MOUNT  
SURFACE CASING  
WITH LOCK



ELEVATION TOP OF RISER: N/A.

TYPE OF SURFACE SEAL: Portland Cement

TYPE OF PROTECTIVE CASING: steel rebar

I.D. OF PROTECTIVE CASING: 8"

DIAMETER OF HOLE: 8"

TYPE OF RISER PIPE: PVC

RISER PIPE I.D.: 2"

TYPE OF BACKFILL/SEAL: benite/grout mix

ELEVATION/DEPTH TOP OF SEAL: 11

TYPE OF SEAL: 30/60 fine silica sand

ELEVATION/DEPTH TOP OF SAND: 12

ELEVATION/DEPTH TOP OF SCREEN: 13

TYPE OF SCREEN: PVC

SLOT SIZE x LENGTH: 0.01 x 10 ft

TYPE OF SAND PACK: 20/30 silica sand

DIAMETER OF HOLE IN BEDROCK: N/A

ELEVATION / DEPTH BOTTOM OF SCREEN: 13.00

ELEVATION / DEPTH BOTTOM OF SAND: 13.5

ELEVATION/DEPTH BOTTOM OF HOLE: 13.5

BACKFILL MATERIAL BELOW SAND: N/A



Tetra Tech NUS, Inc.

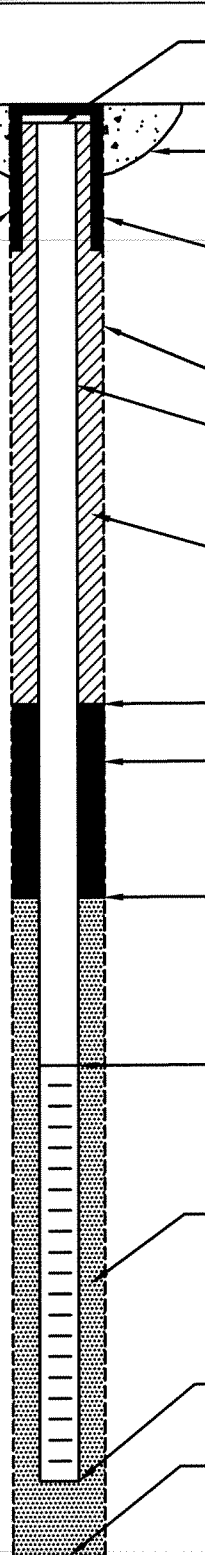
# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: MW-08

PROJECT <u>Sigbee Marine</u>	LOCATION <u>NAS Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>GT0-095</u>	BORING <u>MW-08</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/7/08</u>	DATE COMPLETED <u>5/7/08</u>	DEVELOPMENT METHOD <u>centrifugal</u>
FIELD GEOLOGIST <u>GB</u>	DATUM _____	
GROUND ELEVATION _____		

ACAD:FORM\_MWFM.dwg 07/20/99 INL

FLUSH MOUNT  
SURFACE CASING  
WITH LOCK



ELEVATION TOP OF RISER:	<u>N/A</u>
TYPE OF SURFACE SEAL: <u>Portland Cement</u>	
TYPE OF PROTECTIVE CASING: <u>steel mandrel</u>	
I.D. OF PROTECTIVE CASING: <u>6"</u>	
DIAMETER OF HOLE: <u>8"</u>	
TYPE OF RISER PIPE: <u>PVC</u>	
RISER PIPE I.D.: <u>2"</u>	
TYPE OF BACKFILL/SEAL: <u>bentonite/gROUT mix</u>	
ELEVATION/DEPTH TOP OF SEAL:	<u>11</u>
TYPE OF SEAL: <u>30/60 fine silica sand</u>	
ELEVATION/DEPTH TOP OF SAND:	<u>12</u>
ELEVATION/DEPTH TOP OF SCREEN:	<u>13</u>
TYPE OF SCREEN: <u>PVC</u>	
SLOT SIZE x LENGTH: <u>0.01 x 10 ft</u>	
TYPE OF SAND PACK: <u>20/30 silica sand</u>	
DIAMETER OF HOLE IN BEDROCK: <u>N/A</u>	
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>13.95</u>
ELEVATION / DEPTH BOTTOM OF SAND:	<u>13.5</u>
ELEVATION/DEPTH BOTTOM OF HOLE:	<u>13.5</u>
BACKFILL MATERIAL BELOW SAND: <u>20/30 silica sand</u>	



Tetra Tech NUS, Inc.

# OVERBURDEN MONITORING WELL SHEET FLUSH - MOUNT

WELL NO.: MW-090

PROJECT <u>Sigsbee Marine</u>	LOCATION <u>NAS Key West</u>	DRILLER <u>Billy Moss</u>
PROJECT NO. <u>070-09</u>	BORING <u>MW-09</u>	DRILLING METHOD <u>HSA</u>
DATE BEGUN <u>5/7/08</u>	DATE COMPLETED <u>5/9/08</u>	DEVELOPMENT METHOD <u>Centrifugal</u>
FIELD GEOLOGIST <u>GB</u>	DATUM _____	
GROUND ELEVATION _____		

ACAD: FORM\_MWFM.dwg 07/20/99 INL

	ELEVATION TOP OF RISER:	<u>N/A</u>
	TYPE OF SURFACE SEAL:	<u>Portland cement</u>
	TYPE OF PROTECTIVE CASING:	<u>Steel mach. h.</u>
	I.D. OF PROTECTIVE CASING:	<u>8"</u>
	DIAMETER OF HOLE:	<u>8"</u>
	TYPE OF RISER PIPE:	<u>PVC</u>
	RISER PIPE I.D.:	<u>PVC 2"</u>
	TYPE OF BACKFILL/SEAL:	<u>benlonite/gout mix</u>
	ELEVATION/DEPTH TOP OF SEAL:	<u>116 ft</u>
	TYPE OF SEAL:	<u>30/65 fine silica sand</u>
	ELEVATION/DEPTH TOP OF SAND:	<u>117 ft</u>
	ELEVATION/DEPTH TOP OF SCREEN:	<u>119 ft</u>
	TYPE OF SCREEN:	<u>PVC</u>
	SLOT SIZE x LENGTH:	<u>0.01 x 10 ft</u>
TYPE OF SAND PACK:	<u>20/30 silica sand</u>	
DIAMETER OF HOLE IN BEDROCK:	<u>N/A</u>	
ELEVATION / DEPTH BOTTOM OF SCREEN:	<u>124.0</u>	
ELEVATION / DEPTH BOTTOM OF SAND:	<u>125.0</u>	
ELEVATION/DEPTH BOTTOM OF HOLE:	<u>125.0</u>	
BACKFILL MATERIAL BELOW SAND:	<u>20/30 silica sand</u>	

[Print New](#)

Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG****Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08Project Information

Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-04 - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-04  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.04  
**Sampling Method** na **Total Well Depth (ft.)** 15 **Water Quality Meter**  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter**  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** na

Purge Entries

Date	Time	Water Flow Level Rate (ft.) (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp °C	ORP (mV)	Salinity (%)	Incremental Other Volume (mL)
5/8/08	16:35	3.16 200	Clear	6.95	31241	0.43	-1.34	27.89	-275.2	na	0
5/8/08	16:41	3.16 200	Clear	6.94	31241	0.44	-1.30	27.90	-275.3	na	1200
5/8/08	16:48	3.16 200	Clear	6.94	31241	0.40	-1.22	27.92	-275.6	na	1400
5/8/08	16:56	3.16 200	Clear	6.93	31241	0.40	-1.23	27.92	-275.8	na	1600

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.40
<b>Total Vo. Purge (L)</b>	4.2	<b>Waterlevel (ft.)</b>	3.16	<b>Turbidity (NTUs)</b>	-1.23
<b>Start Purge (hrs.)</b>	4:35:00 PM	<b>Flowrate (mL/min)</b>	200	<b>Temp (C)</b>	27.92
<b>End Purge (hrs.)</b>	4:56:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-275.8
<b>Total Purge Time (min.)</b>	21	<b>pH (S.U.)</b>	6.93	<b>Salinity</b>	na
		<b>Conductivity (mS/cm)</b>	31241	<b>Other</b>	

## General Observations and Notes

approximately 25 gallons purged from well earlier today with centrifugal pump

- End of Report -



Tetra Tech NUS, Inc.

## GROUNDWATER SAMPLE LOG

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08

### Project Information

#### Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-05 - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-05  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Medium concentration

### Well and Sample Data

<b>Date</b>		<b>Static Water Level (ft.)</b>	3.25
<b>Purge Method</b>	Low flow - peristaltic	<b>Total Well Depth (ft.)</b>	15
<b>Sampling Method</b>	na	<b>Water Quality Meter</b>	06K1082
<b>MS/MSD Collected?</b>		<b>Well Riser Diameter (in.)</b>	2
<b>Duplicate Sample Collected?</b>	N	<b>Pump Control Box</b>	No Data
<b>Corresponding Duplicate Sample ID</b>		<b>Well Volumes Req.</b>	1
		<b>Turbidity Meter</b>	PN-26858
		<b>Monitor Reading (ppm)</b>	na

### Purge Entries

Date	Time	Water Flow Level Rate (ft.) (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp °C	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/8/08	14:00	3.25 200	Clear	7.1	46779	0.14	-1.24	26.71	-291.8	na		0
5/8/08	14:05	3.25 200	Clear	7.10	46961	0.11	-2.4	26.67	-295	na		1000
5/8/08	14:11	3.25 200	Clear	7.10	47053	0.10	-1.20	26.67	-295.6	na		1200
5/8/08	14:16	3.25 200	Clear	7.10	47140	0.10	-1.23	26.68	-296	na		1000

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.10
<b>Total Vo. Purge (L)</b>	3.2	<b>Waterlevel (ft.)</b>	3.25	<b>Turbidity (NTUs)</b>	-1.23
<b>Start Purge (hrs.)</b>	2:00:00 PM	<b>Flowrate (mL/min)</b>	200	<b>Temp (C)</b>	26.68
<b>End Purge (hrs.)</b>	2:16:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-296
<b>Total Purge Time (min.)</b>	16	<b>pH (S.U.)</b>	7.10	<b>Salinity</b>	na
		<b>Conductivity (mS/cm)</b>	47140	<b>Other</b>	



## General Observations and Notes

wells previously purged with whale pump. Approximately 18 gallons of groundwater removed.

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-06 - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-06  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.14  
**Sampling Method** **Total Well Depth (ft.)** 13 **Water Quality Meter**  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** No Data  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)**

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/8/08	16:01	3.19	200	Clear	6.99	31234	0.65	-1.23	28.42	-265.2	na		0
5/8/08	16:07	3.19	200	Clear	6.98	31233	0.58	-1.20	28.40	-265.5	na		1200
5/8/08	16:16	3.19	200	Clear	6.98	31233	0.52	-1.14	28.40	-265.0	na		1800
5/8/08	16:25	3.19	200	Clear	6.98	31233	0.50	-1.11	28.40	-265.0	na		1800

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.50
<b>Total Vo. Purge (L)</b>	4.8	<b>Waterlevel (ft.)</b>	3.19	<b>Turbidity (NTUs)</b>	-1.11
<b>Start Purge (hrs.)</b>	4:01:00 PM	<b>Flowrate (mL/min)</b>	200	<b>Temp (C)</b>	28.40
<b>End Purge (hrs.)</b>	4:25:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-265.0
<b>Total Purge Time (min.)</b>	24	<b>pH (S.U.)</b>	6.98	<b>Salinity</b>	na
		<b>Conductivity (mS/cm)</b>	31233	<b>Other</b>	

### General Observations and Notes

approximately 20 gallons purged from well earlier today with a whale pump. Water clears after development  
- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-07 - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-07  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** -Select-

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)**  
**Sampling Method** **Total Well Depth (ft.)** 13 **Water Quality Meter**  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter**  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)**

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/8/08	15:25	3.10	200	Clear	7.67	31395	1.25	-2.3	27.51	-283.4	na	-	0
5/8/08	15:31	3.10	200	Clear	7.366	31247	0.56	-123	27.29	-284.2	na		1200
5/8/08	15:40	3:10	200	Clear	7.36	31246	0.49	-1.20	27.28	-284.2	na	-	1800
5/8/08	15:45	3.10	200	Clear	7.36	31245	0.45	-1.14	27.27	-284.2	na		1000

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.45
<b>Total Vo. Purge (L)</b>	4	<b>Waterlevel (ft.)</b>	3.10	<b>Turbidity (NTUs)</b>	-1.14
<b>Start Purge (hrs.)</b>	3:25:00 PM	<b>Flowrate (mL/min)</b>	200	<b>Temp (C)</b>	27.27
<b>End Purge (hrs.)</b>	3:45:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-284.2
<b>Total Purge Time (min.)</b>	20	<b>pH (S.U.)</b>	7.36	<b>Salinity</b>	na
		<b>Conductivity (mS/cm)</b>	31245	<b>Other</b>	

## General Observations and Notes

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No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-08 - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-08  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** -Select-

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)**  
**Sampling Method** **Total Well Depth (ft.)** 13 **Water Quality Meter**  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter**  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)**

Purge Entries

Date	Time	Water Flow Level Rate (ft.) (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp °C	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/8/08	14:25	2.27 200	Clear	6.99	54033	0.57	-1.30	27.99	-321.5	na		0
5/8/08	14:31	2.30 200	Clear	6.92	54137	0.32	-1.20	27.94	-323.5	na	-	1200



# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>
<b>Total Vo. Purge (L)</b>	1.2	<b>Waterlevel (ft.)</b>		<b>Turbidity (NTUs)</b>
<b>Start Purge (hrs.)</b>	2:25:00 PM	<b>Flowrate (mL/min)</b>		<b>Temp (C)</b>
<b>End Purge (hrs.)</b>	2:31:00 PM	<b>Color</b>		<b>ORP (mV)</b>
<b>Total Purge Time (min.)</b>	6	<b>pH (S.U.)</b>		<b>Salinity</b>
		<b>Conductivity (mS/cm)</b>		<b>Other</b>

## General Observations and Notes

---

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/8/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-09D - Development  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-09D  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** -Select-

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)**  
**Sampling Method** **Total Well Depth (ft.)** 25 **Water Quality Meter**  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter**  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)**

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/8/08	14:50	2.67	200	Clear	7.27	50836	1.05	-1.39	27.49	-220.5	na	-	0
5/8/08	14:56	2.67	200	Clear	7.27	51130	1.14	-1.34	7.27	-215.3	na		1200
5/8/08	15:13	2.67	200	Clear	7.28	51652	1.35	-1.34	7.29	-214.9	na		3400

Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>
<b>Total Vo. Purge (L)</b>	4.6	<b>Waterlevel (ft.)</b>		<b>Turbidity (NTUs)</b>
<b>Start Purge (hrs.)</b>	2:50:00 PM	<b>Flowrate (mL/min)</b>		<b>Temp (C)</b>
<b>End Purge (hrs.)</b>	3:13:00 PM	<b>Color</b>		<b>ORP (mV)</b>
<b>Total Purge Time (min.)</b>	23	<b>pH (S.U.)</b>		<b>Salinity</b>
		<b>Conductivity (mS/cm)</b>		<b>Other</b>

## General Observations and Notes

---

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-04-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-04  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.90  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 15 **Water Quality Meter** 06K1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** na

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	08:25	3.90	150	Clear	-	-	-	-	-	-	-	-	0
5/12/08	08:51	4.13	150	Clear	7.18	49349	0.98	1.2	26.52	-312.5	-	-	3900
5/12/08	08:54	4.14	150	Clear	7.18	49237	0.95	1.2	26.51	-314.4	-	-	450
5/12/08	08:57	4.14	150	Clear	7.16	47710	0.87	2.1	26.49	-315.2	-	-	450
5/12/08	09:02	3.14	150	Clear	7.16	47715	0.87	2.1	26.47	-314.2	-	-	750
5/12/08	09:06	3.14	150	Clear	7.15	47380	0.95	1.2	26.45	-316.5	-	-	600

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.95
<b>Total Vo. Purge (L)</b>	6.15	<b>Waterlevel (ft.)</b>	3.14	<b>Turbidity (NTUs)</b>	1.2
<b>Start Purge (hrs.)</b>	8:25:00 AM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	26.45
<b>End Purge (hrs.)</b>	9:06:00 AM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-316.5
<b>Total Purge Time (min.)</b>	41	<b>pH (S.U.)</b>	7.15	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	47380	<b>Other</b>	-






Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 09:09	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 09:09	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 09:09	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -





Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-05-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-05  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** -Select-

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.62  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 15 **Water Quality Meter** 06K1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** -

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp °C	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	11:17	3.62	150	Clear	-	-	-	-	--	-	-	-	0
5/12/08	11:43	2.84	150	Clear	6.99	52087	0.38	4.3	27.02	-315.8	-	-	3900
5/12/08	11:46	2.84	150	Clear	6.99	52017	0.33	3.5	27.03	-317.4	-	-	450
5/12/08	11:49	2.83	150	Clear	6.99	51957	0.31	5.4	27.02	-318.0	-	-	450
5/12/08	11:52	2.83	150	Clear	6.99	51923	0.30	3.2	27.03	-318.2	-	-	450

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.30
<b>Total Vo. Purge (L)</b>	5.25	<b>Waterlevel (ft.)</b>	2.83	<b>Turbidity (NTUs)</b>	3.2
<b>Start Purge (hrs.)</b>	11:17:00 AM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	27.03
<b>End Purge (hrs.)</b>	11:52:00 AM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-318.2
<b>Total Purge Time (min.)</b>	35	<b>pH (S.U.)</b>	6.99	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	51923	<b>Other</b>	-






Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 11:56	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 11:56	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 11:56	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-06-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-06  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 4.30  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 13 **Water Quality Meter** 06K1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** na

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	09:20	3.90	150	Clear	-	-	-	-	-	-	-	-	0
5/12/08	09:41	4.10	150	Clear	7.22	32775	0.93	1.34	26.57	-276.6	-	-	3150
5/12/08	09:47	4.10	150	Clear	7.17	32728	0.55	3.2	26.55	-282.1	-	-	900
5/12/08	09:50	4.10	150	Clear	7.16	32723	0.51	4.3	26.54	-281.4	-	-	450
5/12/08	09:53	4.10	150	Clear	7.15	32722	0.51	2.1	26.54	-281.6	-	-	450
5/12/08	09:56	4.10	150	Clear	7.15	32713	0.47	3.2	26.55	-283.2	-	-	450

# Final Purge / Sample Data

---

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.47
<b>Total Vo. Purge (L)</b>	5.4	<b>Waterlevel (ft.)</b>	4.10	<b>Turbidity (NTUs)</b>	3.2
<b>Start Purge (hrs.)</b>	9:20:00 AM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	26.55
<b>End Purge (hrs.)</b>	9:56:00 AM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-283.2
<b>Total Purge Time (min.)</b>	36	<b>pH (S.U.)</b>	7.15	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	32713	<b>Other</b>	-






Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 10:03	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 10:03	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 10:03	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-07-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-07  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 4.22  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 13 **Water Quality Meter** 06k1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** NA

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	10:15	4.22	150	Clear	-	-	-	-	-	-	-	-	0
5/12/08	10:43	4.45	150	Clear	7.12	30865	0.56	1.45	27.00	-274.3	-	-	4200
5/12/08	10:46	4.42	150	Clear	7.12	29856	0.54	3.2	27.03	-273.3	-	-	450
5/12/08	10:50	4.42	150	Clear	7.12	29927	0.51	3.2	27.04	-279.5	-	-	600
5/12/08	10:54	4.42	150	Clear	7.12	29945	0.48	3.6	27.06	-280.2	-	-	600
5/12/08	10:59	4.42	150	Clear	7.13	29965	0.46	5.4	27.07	-280.3	-	-	750

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.46
<b>Total Vo. Purge (L)</b>	6.6	<b>Waterlevel (ft.)</b>	4.42	<b>Turbidity (NTUs)</b>	5.4
<b>Start Purge (hrs.)</b>	10:15:00 AM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	27.07
<b>End Purge (hrs.)</b>	10:59:00 AM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-280.3
<b>Total Purge Time (min.)</b>	44	<b>pH (S.U.)</b>	7.13	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	29965	<b>Other</b>	-








Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 11:07	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 11:07	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 11:07	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-08-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-08  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Medium concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.39  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 13 **Water Quality Meter** 06K1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** Y **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** KWSM-FD-01-0508 **Monitor Reading (ppm)** NA

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp (°C)	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	12:51	3.39	150	Clear	-	-	-	-	--	-	-	-	0
5/12/08	13:20	3.52	150	Clear	7.17	49071	0.49	2.3	27.38	-246.7	-	-	4350
5/12/08	13:24	3.52	150	Clear	7.12	49271	0.38	4.3	27.35	263.8	-	-	600
5/12/08	13:29	3.52	150	Clear	7.11	49341	0.33	3.2	27.34	-274.6	-	-	750
5/12/08	13:34	3.52	150	Clear	7.10	49347	0.29	3.2	27.32	-287.1	-	-	750
5/12/08	13:37	3.52	150	Clear	7.09	49364	0.27	4.3	27.32	-290.5	-	-	450
5/12/08	13:40	3.52	150	Clear	7.09	49329	0.27	2.4	27.30	-293.7	-	-	450



# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.27
<b>Total Vo. Purge (L)</b>	7.35	<b>Waterlevel (ft.)</b>	3.52	<b>Turbidity (NTUs)</b>	2.4
<b>Start Purge (hrs.)</b>	12:51:00 PM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	27.30
<b>End Purge (hrs.)</b>	1:40:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-293.7
<b>Total Purge Time (min.)</b>	49	<b>pH (S.U.)</b>	7.09	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	49329	<b>Other</b>	-






Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 13:45	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 13:45	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 13:45	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -



Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

**Created By** John Wright **Modified By** Gary Braganza **Printed By** Gary Braganza  
**Created Date** 5/8/08 **Modified Date** 5/13/08 **Printed Date** 9/3/08

Project Information

## Well Installation and Sampling - KEY WEST NAS

**Facility Name** KEY WEST NAS **Sample ID #** KWSMMW-09D-0508  
**TtNUS Project #** 112G00979 **Well ID** KWSMMW-09D  
**Task/Contract #** 0095 **Well Type** Monitoring Well  
**WBS Code #** **Sampled By** Gary Braganza  
**Status** Working **Concentration** Low concentration

Well and Sample Data

**Date**  
**Purge Method** Low flow - peristaltic **Static Water Level (ft.)** 3.42  
**Sampling Method** peristaltic **Total Well Depth (ft.)** 25 **Water Quality Meter** 06K1082  
**MS/MSD Collected?** **Well Riser Diameter (in.)** 2 **Pump Control Box** No Data  
**Duplicate Sample Collected?** N **Well Volumes Req.** 1 **Turbidity Meter** PN-26858  
**Corresponding Duplicate Sample ID** **Monitor Reading (ppm)** NA

Purge Entries

Date	Time	Water Level (ft.)	Flow Rate (mL/min)	Color	pH (S.U.)	S.C. (mS/cm)	DO (mg/L)	Turbidity (NTUs)	Temp °C	ORP (mV)	Salinity (%)	Other	Incremental Volume (mL)
5/12/08	14:00	3.42	150	Clear	-	-	-	-	-	-	-	-	0
5/12/08	14:31	3.61	150	Clear	6.90	55907	0.62	12.2	27.28	-330.4	-	-	4650
5/12/08	14:34	3.61	150	Clear	6.89	55933	0.56	9.2	27.30	-329.4	-	-	450
5/12/08	14:36	3.61	150	Clear	6.88	55903	0.54	5.4	27.32	-330.8	-	-	300
5/12/08	14:39	3.61	150	Clear	6...88	55902	0.52	4.3	27.32	-331.1	-	-	450

# Final Purge / Sample Data

<b>One Casing Volume</b>		<b>Method</b>	Low flow - peristaltic	<b>Dissolved Oxygen (mg/L)</b>	0.52
<b>Total Vo. Purge (L)</b>	5.85	<b>Waterlevel (ft.)</b>	3.61	<b>Turbidity (NTUs)</b>	4.3
<b>Start Purge (hrs.)</b>	2:00:00 PM	<b>Flowrate (mL/min)</b>	150	<b>Temp (C)</b>	27.32
<b>End Purge (hrs.)</b>	2:39:00 PM	<b>Color</b>	Clear	<b>ORP (mV)</b>	-331.1
<b>Total Purge Time (min.)</b>	39	<b>pH (S.U.)</b>	6...88	<b>Salinity</b>	-
		<b>Conductivity (mS/cm)</b>	55902	<b>Other</b>	-






Tetra Tech NUS, Inc.

**GROUNDWATER SAMPLE LOG**

Well Installation and Sampling - KEY WEST NAS

Analysis Records

Collected Date	Time	Analysis / Method	Description of Analysis	Preservative	Count	Type	Requirements	Comments	Chain#
	5/12/08 14:45	SW-846 5030B/8260	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials		ED00000076-1
	5/12/08 14:45	SW-846 8270C SIM	PAHs	4°C	2	Glass - Amber	1L		ED00000076-1
	5/12/08 14:45	FL-PRO	TRPH	4°C/H2SO4	2	Glass - Amber	1L		ED00000076-1

Page 2 of 2

General Observations and Notes

No Notes

- End of Report -



**APPENDIX B**  
**LABORATORY ANALYTICAL REPORTS**



**Tetra Tech NUS**

## **INTERNAL CORRESPONDENCE**

**TO:** C. BRYAN **DATE:** JULY 28, 2008

**FROM:** TREVER SHEETS **COPIES:** DV FILE

**SUBJECT:** ORGANIC DATA VALIDATION- VOC / PAH / TPH  
CTO 0095, NAS KEY WEST  
SDG F57467

**SAMPLES:** 7/Aqueous/VOC/ PAH/TPH

KWSM-FD-01-0508	KWSMMW-04-0508	KWSMMW-05-0508
KWSMMW-06-0508	KWSMMW-07-0508	KWSMMW-08-0508
KWSMMW-09D-0508		

### OVERVIEW

The sample set for CTO 0095 NAS Key West, SDG F57467 consists of seven (7) aqueous environmental samples. One field duplicate pair was included in this SDG: KWSM-FD-01-0508/KWSMMW-08-0508.

Samples were analyzed for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAH), and total petroleum hydrocarbons (TPH) as indicated above.

The samples were collected by TetraTech NUS on May 12, 2008 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with SW-846 Methods 8260B, 8270C, and Florida-PRO analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- \*     •     Data Completeness
- \*     •     Holding Times
- Initial/Continuing Calibrations
- Laboratory Method Blank Results
- \*     •     Detection Limits
- Field Duplicate Precision

The symbol (\*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and the elimination of false positives.

### VOC

The initial calibration percent relative standard deviation (%RSD) for methylene chloride and acrolein was greater than the 30% quality control limit but less than 90% on instrument GCMSJ on 5/20/08. No actions were necessary as no positive results were reported for this compound in any of the affected samples and nondetects are not impacted for this noncompliance in a limited data review.

The initial calibration %RSD for bromomethane was greater than the 30% quality control limit but less than 90% on instrument GCMSM on 5/23/08. No actions were necessary as no positive results were reported for this

compound in any of the affected samples and non-detects are not impacted for this noncompliance in a limited data review.

The continuing calibration percent difference (%D) for bromomethane was greater than the 25% quality control limit but less than 90% on instrument GCMSM on 5/23/08 and 5/24/08 at 13:36 and 8:42 respectively. No actions were necessary as no positive results were reported for this compound in samples KWSMMW-04-0508, KWSMMW-05-0508, KWSMMW-06-0508, KWSMMW-07-0508, KWSMMW-08-0508, and KWSMMW-09D-0508 and non-detects are not impacted for this noncompliance in a limited data review.

The continuing calibration %D for chloroethane was greater than the 25% quality control limit but less than 90% on instrument GCMSM on 5/23/08 at 13:36. No actions were necessary as no positive results were reported for this compound in samples KWSMMW-06-0508, KWSMMW-07-0508, KWSMMW-08-0508, and KWSMMW-09D-0508 and non-detects are not impacted for this noncompliance in a limited data review.

The laboratory control sample VJ2472-BS yielded a high percent recovery for acrylonitrile. No actions were necessary as no positive results were reported for this compound in the affected samples and this is a limited data review.

The following compound was detected in the method blank at the following maximum concentration:

<u>Compound</u>	<u>Maximum Concentration</u>	<u>Action Level</u>
Methylene Chloride	1.6 ug/L	16 ug/L

An action level of 10X the maximum concentration was used to evaluate the sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No action was taken because methylene chloride was not detected in the associated samples.

Field duplicate imprecision was noted in the duplicate pair KWSM-FD-01-0508/ KWSMMW-08-0508 for ethylbenzene because the relative percent difference (RPD) exceeded 30%. The ethylbenzene results for the field duplicate pair have been qualified as estimated (J).

#### Polynuclear Aromatic Hydrocarbons

No qualification of the data was necessary.

#### Total Petroleum Hydrocarbons

No qualification of the data was necessary.

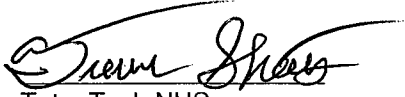
#### EXECUTIVE SUMMARY

**Laboratory Performance Issues:** Multiple VOC fraction compounds had initial and continuing calibration percent recovery, percent difference (%D), and percent relative standard deviation (%RSD) noncompliances.

**Other Factors Affecting Data Quality:** None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the DoD QSM for Environmental Laboratories.



Tetra Tech NUS  
Trevor Sheets  
Data Validator



TetraTech NUS

Joseph A. Samchuck  
Data Validation Quality Assurance Officer

Attachments:

Appendix A – Qualified Analytical Results  
Appendix B – Results as Reported by the Laboratory  
Appendix C – Support Documentation

**APPENDIX A**

**QUALIFIED ANALYTICAL RESULTS**

**Data Validation Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = GFAA PDS - GFAA MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (e.g. base-line drifting)
- P = Uncertainty near detection limit ( $< 2 \times \text{IDL}$  for inorganics and  $< \text{CRQL}$  for organics)
- Q = Other problems (can be any number of issues; e.g. poor chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = % Difference between columns/detectors  $> 25\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $< 30\%$
- Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: OV

nsample KWSM-FD-01-0508  
samp\_date 5/12/2008  
lab\_id F57467-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF: KWSMMW-08-0508

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.2	U	U	
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	1			
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	2.8		J	G
METHYL TERT-BUTYL ETHER	8.2			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.55	I	J	P
TOTAL XYLENES	12.7			

nsample KWSM-FD-01-0508  
samp\_date 5/12/2008  
lab\_id F57467-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF: KWSMMW-08-0508

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

nsample KWSMMW-04-0508  
samp\_date 5/12/2008  
lab\_id F57467-2  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.28	I	J	P
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.39	I	J	P
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	0.2	U	U	
METHYL TERT-BUTYL ETHER	6			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.41	I	J	P
TOTAL XYLENES	0.56	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: OV

nsample KWSMMW-04-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-2  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

nsample KWSMMW-05-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-3  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.27	I	J	P
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.25	I	J	P
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	0.42	I	J	P
METHYL TERT-BUTYL ETHER	6.6			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.34	I	J	P
TOTAL XYLENES	0.66	I	J	P

nsample KWSMMW-05-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-3  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	



PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: OV

nsample KWSMMW-06-0508  
samp\_date 5/12/2008  
lab\_id F57467-4  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

nsample KWSMMW-06-0508  
samp\_date 5/12/2008  
lab\_id F57467-4  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

nsample KWSMMW-07-0508  
samp\_date 5/12/2008  
lab\_id F57467-5  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.2	U	U	
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.21	U	U	
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	0.2	U	U	
METHYL TERT-BUTYL ETHER	12.8			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.3	I	J	P
TOTAL XYLENES	0.56	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.2	U	U	
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.21	U	U	
CHLOROMETHANE	2.1			
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	0.2	U	U	
METHYL TERT-BUTYL ETHER	20.9			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.79	I	J	P
TOTAL XYLENES	0.56	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: OV

nsample KWSMMW-07-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-5  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

nsample KWSMMW-08-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-6  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

nsample KWSMMW-08-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-6  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2.2	I	J	P
BENZENE	0.2	U	U	
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	1.2			
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	4.1		J	G
METHYL TERT-BUTYL ETHER	8.5			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.6	I	J	P
TOTAL XYLENES	16.6			

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: OV

nsample KWSMMW-09D-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-7  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

nsample KWSMMW-09D-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-7  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.49	I	J	P
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.47	I	J	P
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	4.4			
METHYL TERT-BUTYL ETHER	3.1			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	2.9			
TOTAL XYLENES	26			

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: PAH

nsample KWSM-FD-01-0508  
samp\_date 5/12/2008  
lab\_id F57467-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF: KWSMMW-08-0508

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.57	I	J	P
2-METHYLNAPHTHALENE	0.63	I	J	P
ACENAPHTHENE	0.96	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	1.1			
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

nsample KWSMMW-04-0508  
samp\_date 5/12/2008  
lab\_id F57467-2  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.24	U	U	
2-METHYLNAPHTHALENE	0.24	U	U	
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	0.24	U	U	
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

nsample KWSMMW-05-0508  
samp\_date 5/12/2008  
lab\_id F57467-3  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.24	U	U	
2-METHYLNAPHTHALENE	0.24	U	U	
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	0.24	U	U	
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: PAH

nsample KWSMMW-06-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-4  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

nsample KWSMMW-07-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-5  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

nsample KWSMMW-08-0508  
 samp\_date 5/12/2008  
 lab\_id F57467-6  
 qc\_type NM  
 units UG/L  
 Pct\_Solids  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.24	U	U	
2-METHYLNAPHTHALENE	0.24	U	U	
ACENAPHTHENE	0.49	U	U	
ACENAPHTHYLENE	0.49	U	U	
ANTHRACENE	0.49	U	U	
BENZO(A)ANTHRACENE	0.049	U	U	
BENZO(A)PYRENE	0.097	U	U	
BENZO(B)FLUORANTHENE	0.049	U	U	
BENZO(G,H,I)PERYLENE	0.097	U	U	
BENZO(K)FLUORANTHENE	0.097	U	U	
CHRYSENE	0.097	U	U	
DIBENZO(A,H)ANTHRACENE	0.049	U	U	
FLUORANTHENE	0.34	I	J	P
FLUORENE	0.26	I	J	P
INDENO(1,2,3-CD)PYRENE	0.049	U	U	
NAPHTHALENE	0.24	U	U	
PHENANTHRENE	0.82	I	J	P
PYRENE	0.24	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.24	U	U	
2-METHYLNAPHTHALENE	0.24	U	U	
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	0.24	U	U	
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.58	I	J	P
2-METHYLNAPHTHALENE	0.63	I	J	P
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	1.2			
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: PAH

nsample KWSMMW-09D-0508  
samp\_date 5/12/2008  
lab\_id F57467-7  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.41	I	J	P
2-METHYLNAPHTHALENE	0.68	I	J	P
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	1.1			
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

**PROJ\_NO: 00979**

SDG: F57467 MEDIA: WATER DATA FRACTION: PET

nsample  
 samp\_date  
 lab\_id  
 qc\_type  
 units  
 Pct\_Solids  
 DUP\_OF:

KWSM-FD-01-0508  
 5/12/2008  
 F57467-1  
 NM  
 MG/L  
 KWSMMW-08-0508

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.289			

nsample  
 samp\_date  
 lab\_id  
 qc\_type  
 units  
 Pct\_Solids  
 DUP\_OF:

KWSMMW-04-0508  
 5/12/2008  
 F57467-2  
 NM  
 MG/L  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.16	U	U	

nsample  
 samp\_date  
 lab\_id  
 qc\_type  
 units  
 Pct\_Solids  
 DUP\_OF:

KWSMMW-05-0508  
 5/12/2008  
 F57467-3  
 NM  
 MG/L  
 DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.223	I	J	P

PROJ\_NO: 00979

SDG: F57467 MEDIA: WATER DATA FRACTION: PET

nsample KWSMMW-06-0508  
samp\_date 5/12/2008  
lab\_id F57467-4  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.17	U	U	

nsample KWSMMW-07-0508  
samp\_date 5/12/2008  
lab\_id F57467-5  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.429			

nsample KWSMMW-08-0508  
samp\_date 5/12/2008  
lab\_id F57467-6  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.325			



**PROJ\_NO: 00979**

SDG: F57467 MEDIA: WATER DATA FRACTION: PET

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nsample KWSMMW-09D-0508  
samp\_date 5/12/2008  
lab\_id F57467-7  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.201	I	J	P

**APPENDIX B**

**RESULTS AS REPORTED BY THE LABORATORY**

Accutest Laboratories

## Report of Analysis

Page 1 of 2

Client Sample ID:	KWSM-FD-01-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-1	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J038563.D	1	05/23/08	KW	n/a	n/a	VJ2472
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.20 U	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	1.0	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	2.8	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	8.2	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit

RL = Reporting Limit = PQL

L = Indicates value exceeds calibration range

I = Result &gt;= MDL but &lt; RL J = Estimated value

V = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: KWSM-FD-01-0508  
 Lab Sample ID: F57467-1  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08  
 Date Received: 05/13/08  
 Percent Solids: n/a

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.55	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	12.7	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		87-116%
17060-07-0	1,2-Dichloroethane-D4	97%		76-127%
2037-26-5	Toluene-D8	104%		86-112%
460-00-4	4-Bromofluorobenzene	105%		84-120%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

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3.2  
3

Client Sample ID: KWSMMW-04-0508  
 Lab Sample ID: F57467-2  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08  
 Date Received: 05/13/08  
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027533.D	1	05/24/08	MM	n/a	n/a	VM1134
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.28	1.0	0.20	ug/l	I
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.39	1.0	0.21	ug/l	I
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.20 U	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.0	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSMMW-04-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-2	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.41	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	0.56 U	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	103%		76-127%
2037-26-5	Toluene-D8	107%		86-112%
460-00-4	4-Bromofluorobenzene	108%		84-120%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID: KWSMMW-05-0508  
 Lab Sample ID: F57467-3  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08

Date Received: 05/13/08

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027534.D	1	05/24/08	MM	n/a	n/a	VM1134
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.27	1.0	0.20	ug/l	I
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.25	1.0	0.21	ug/l	I
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.42	1.0	0.20	ug/l	I
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.6	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit

RL = Reporting Limit = PQL

L = Indicates value exceeds calibration range

I = Result &gt;= MDL but &lt; RL J = Estimated value

V = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: KWSMMW-05-0508  
Lab Sample ID: F57467-3  
Matrix: AQ - Ground Water  
Method: SW846 8260B  
Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08

Date Received: 05/13/08

Percent Solids: n/a

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.34	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	0.66	3.0	0.56	ug/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		87-116%
17060-07-0	1,2-Dichloroethane-D4	104%		76-127%
2037-26-5	Toluene-D8	107%		86-112%
460-00-4	4-Bromofluorobenzene	106%		84-120%

U = Not detected MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound



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## Report of Analysis

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Client Sample ID:	KWSMMW-06-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-4	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027517.D	1	05/23/08	MM	n/a	n/a	VM1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.20 U	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.21 U	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.20 U	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	12.8	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSMMW-06-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-4	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.30	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	0.56 U	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	108%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID: KWSMMW-07-0508  
 Lab Sample ID: F57467-5  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08  
 Date Received: 05/13/08  
 Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027518.D	1	05/23/08	MM	n/a	n/a	VM1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.20 U	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.21 U	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	0.20 U	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	2.1	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	20.9	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSMMW-07-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-5	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.79	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	0.56 U	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		87-116%
17060-07-0	1,2-Dichloroethane-D4	103%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	104%		84-120%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSMMW-08-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-6	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027519.D	1	05/23/08	MM	n/a	n/a	VM1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.2	10	2.0	ug/l	I
71-43-2	Benzene	0.20 U	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	1.2	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	4.1	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	8.5	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSMMW-08-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-6	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.60	1.0	0.27	ug/l	I
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	16.6	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		87-116%
17060-07-0	1,2-Dichloroethane-D4	102%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	99%		84-120%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSMMW-09D-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-7	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M0027520.D	1	05/24/08	MM	n/a	n/a	VM1133
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.49	1.0	0.20	ug/l	I
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.47	1.0	0.21	ug/l	I
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	4.4	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	3.1	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: KWSMMW-09D-0508  
 Lab Sample ID: F57467-7  
 Matrix: AQ - Ground Water  
 Method: SW846 8260B  
 Project: NAS Key West, Key West, FL

Date Sampled: 05/12/08  
 Date Received: 05/13/08  
 Percent Solids: n/a

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	2.9	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	26.0	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		87-116%
17060-07-0	1,2-Dichloroethane-D4	103%		76-127%
2037-26-5	Toluene-D8	106%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



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## Report of Analysis

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3

Client Sample ID:	KWSM-FD-01-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-1	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13734.D	1	05/15/08	RB	05/14/08	OP25062	SR636
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.96 U	0.96	0.96	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.57	0.96	0.24	ug/l	I
91-57-6	2-Methylnaphthalene	0.63	0.96	0.24	ug/l	I
91-20-3	Naphthalene	1.1	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		42-108%
321-60-8	2-Fluorobiphenyl	53%		40-106%
1718-51-0	Terphenyl-d14	50%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSMMW-04-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-2	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13735.D	1	05/15/08	RB	05/14/08	OP25062	SR636
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		42-108%
321-60-8	2-Fluorobiphenyl	59%		40-106%
1718-51-0	Terphenyl-d14	56%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID: KWSMMW-05-0508

Lab Sample ID: F57467-3

Date Sampled: 05/12/08

Matrix: AQ - Ground Water

Date Received: 05/13/08

Method: SW846 8270C BY SIM SW846 3510C

Percent Solids: n/a

Project: NAS Key West, Key West, FL

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13736.D	1	05/15/08	RB	05/14/08	OP25062	SR636
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	63%		40-106%
1718-51-0	Terphenyl-d14	56%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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3.4

Client Sample ID: KWSMMW-06-0508

Lab Sample ID: F57467-4

Date Sampled: 05/12/08

Matrix: AQ - Ground Water

Date Received: 05/13/08

Method: SW846 8270C BY SIM SW846 3510C

Percent Solids: n/a

Project: NAS Key West, Key West, FL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13737.D	1	05/15/08	RB	05/14/08	OP25062	SR636
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.49 U	0.97	0.49	ug/l	
208-96-8	Acenaphthylene	0.49 U	0.97	0.49	ug/l	
120-12-7	Anthracene	0.49 U	0.97	0.49	ug/l	
56-55-3	Benzo(a)anthracene	0.049 U	0.19	0.049	ug/l	
50-32-8	Benzo(a)pyrene	0.097 U	0.19	0.097	ug/l	
205-99-2	Benzo(b)fluoranthene	0.049 U	0.19	0.049	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.097 U	0.19	0.097	ug/l	
207-08-9	Benzo(k)fluoranthene	0.097 U	0.19	0.097	ug/l	
218-01-9	Chrysene	0.097 U	0.19	0.097	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.049 U	0.19	0.049	ug/l	
206-44-0	Fluoranthene	0.34	0.97	0.24	ug/l	I
86-73-7	Fluorene	0.26	0.97	0.24	ug/l	I
193-39-5	Indeno(1,2,3-cd)pyrene	0.049 U	0.19	0.049	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.97	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.97	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.97	0.24	ug/l	
85-01-8	Phenanthrene	0.82	0.97	0.49	ug/l	I
129-00-0	Pyrene	0.24 U	0.97	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		42-108%
321-60-8	2-Fluorobiphenyl	61%		40-106%
1718-51-0	Terphenyl-d14	50%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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3.5

Client Sample ID:	KWSMMW-07-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-5	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13749.D	1	05/16/08	RB	05/14/08	OP25062	SR637
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-57-6	2-Methylnaphthalene	0.24 U	0.96	0.24	ug/l	
91-20-3	Naphthalene	0.24 U	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		42-108%
321-60-8	2-Fluorobiphenyl	55%		40-106%
1718-51-0	Terphenyl-d14	46%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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3.6

Client Sample ID:	KWSMMW-08-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-6	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W040638.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.58	0.96	0.24	ug/l	I
91-57-6	2-Methylnaphthalene	0.63	0.96	0.24	ug/l	I
91-20-3	Naphthalene	1.2	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		42-108%
321-60-8	2-Fluorobiphenyl	45%		40-106%
1718-51-0	Terphenyl-d14	65%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	KWSMMW-09D-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-7	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W040639.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.41	0.96	0.24	ug/l	I
91-57-6	2-Methylnaphthalene	0.68	0.96	0.24	ug/l	I
91-20-3	Naphthalene	1.1	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		42-108%
321-60-8	2-Fluorobiphenyl	46%		40-106%
1718-51-0	Terphenyl-d14	63%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	KWSM-FD-01-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-1	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47335.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.289	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	81%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



Accutest Laboratories

## Report of Analysis

Page 1 of 1

3.2

Client Sample ID:	KWSMMW-04-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-2	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47350.D	1	05/19/08	JB	05/14/08	OP25066	GIJ1781
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.16 U	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	92%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	KWSMMW-05-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-3	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47337.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
Run #2							

	Initial Volume	Final Volume
Run #1	1010 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.223	0.25	0.17	mg/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	121%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

3.4

3

Client Sample ID:	KWSMMW-06-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-4	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47338.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
Run #2							

	Initial Volume	Final Volume
Run #1	1020 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.17 U	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	119%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	KWSMMW-07-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-5	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47339.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.429	0.24	0.17	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	99%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

3.6

3

Client Sample ID:	KWSMMW-08-0508	Date Sampled:	05/12/08
Lab Sample ID:	F57467-6	Date Received:	05/13/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47340.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
Run #2							

	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.325	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		38-122%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

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3.7

3

Client Sample ID:	KWSMMW-09D-0508		
Lab Sample ID:	F57467-7	Date Sampled:	05/12/08
Matrix:	AQ - Ground Water	Date Received:	05/13/08
Method:	FLORIDA-PRO SW846 3510C	Percent Solids:	n/a
Project:	NAS Key West, Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47349.D	1	05/19/08	JB	05/14/08	OP25066	GIJ1781
Run #2							

	Initial Volume	Final Volume
Run #1	1030 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.201	0.24	0.17	mg/l	I

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**APPENDIX C**

**SUPPORT DOCUMENTATION**

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** Tetra Tech NUS

**Job No:** F57467

**Site:** NAS Key West, Key West, FL

**Report Date:** 5/29/2008 10:08:53

7 Samples were collected on 05/12/2008 and were received at Accutest on 05/13/2008 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of F57467. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS by Method SW846 8260B

**Matrix:** AQ

**Batch ID:** VJ2472

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57465-2MS, F57465-2MSD were used as the QC samples indicated.

Blank Spike Recovery for Acrylonitrile is outside control limits.

Matrix Spike and Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, Acrylonitrile, Trichlorofluoromethane are outside control limits. Probable cause: due to matrix interference.

**Matrix:** AQ

**Batch ID:** VM1133

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57606-1MS, F57606-1MSD were used as the QC samples indicated.

Matrix Spike and Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, Dichlorodifluoromethane are outside control limits. Probable cause: due to matrix interference.

**Matrix:** AQ

**Batch ID:** VM1134

All samples were analyzed within the recommended method holding time.

Samples F57492-1MS, F57492-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, Acrolein are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recoverys for 2-Chloroethyl vinyl ether, Chlorobenzene are outside control limits. Probable cause: due to matrix interference.

RPD for MSD for 2-Chloroethyl vinyl ether is outside control limits for sample F57492-1MSD. Probable cause due to sample non-homogeneity.

### Extractables by GCMS by Method SW846 8270C BY SIM

**Matrix:** AQ

**Batch ID:** OP25062

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57465-6MS, F57465-6MSD were used as the QC samples indicated.

**Matrix:** AQ

**Batch ID:** OP25106

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57485-3MS, F57485-3MSD were used as the QC samples indicated.

Matrix Spike Recoverys for 2-Methylnaphthalene, Anthracene, Phenanthrene are outside control limits. Probable cause: due to matrix interference.

Thursday, May 29, 2008



**Extractables by GC by Method FLORIDA-PRO****Matrix:** AQ**Batch ID:** OP25066

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F57466-3MS, F57466-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike and Matrix Spike Duplicate Recoverys for TPH (C8-C40) are outside control limits. Probable cause: due to matrix interference.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Date: May 29, 2008

\_\_\_\_\_  
Ellen Pampel, Inorganic QA (signature on file)

**Thursday, May 29, 2008**

# HOLDTIME

SDG F57467

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP EXTR	EXTR ANL	SMP_ANL
OS	%	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	%	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	%	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	%	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/14/2008	5/16/2008	2	2	4
OS	%	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/19/2008	5/20/2008	7	1	8
OS	%	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/19/2008	5/20/2008	7	1	8
OS	%	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	UG/L	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	UG/L	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/19/2008	5/20/2008	7	1	8
OS	UG/L	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/19/2008	5/20/2008	7	1	8
OS	UG/L	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	UG/L	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	UG/L	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/14/2008	5/15/2008	2	1	3
OS	UG/L	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/14/2008	5/16/2008	2	2	4
OV	%	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	SMP EXTR	EXTR ANL	SMP ANL
OV	%	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	%	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	%	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	%	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	%	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	%	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	UG/L	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	UG/L	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	UG/L	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	UG/L	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	UG/L	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
OV	UG/L	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/24/2008	5/24/2008	12	0	12
OV	UG/L	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/23/2008	5/23/2008	11	0	11
TPH	%	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	%	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/14/2008	5/19/2008	2	5	7
TPH	%	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	%	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	%	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/14/2008	5/19/2008	2	5	7

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	SMP EXTR	EXTR ANL	SMP ANL
TPH	%	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	%	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	MG/L	KWSMMW-09D-0508	F57467-7	NM	5/12/2008	5/14/2008	5/19/2008	2	5	7
TPH	MG/L	KWSM-FD-01-0508	F57467-1	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	MG/L	KWSMMW-04-0508	F57467-2	NM	5/12/2008	5/14/2008	5/19/2008	2	5	7
TPH	MG/L	KWSMMW-05-0508	F57467-3	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	MG/L	KWSMMW-06-0508	F57467-4	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	MG/L	KWSMMW-07-0508	F57467-5	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5
TPH	MG/L	KWSMMW-08-0508	F57467-6	NM	5/12/2008	5/14/2008	5/17/2008	2	3	5

**NAS KEY WEST  
WATER DATA  
F57467**

FRACTION	CHEMICAL	KWSMMW-08-0508	UNITS	KWSM-FD-01-0508	RPD	D
OV	ACRYLONITRILE	2.2 l	UG/L	ND	200.00	2.20
OV	CHLOROFORM	1.2	UG/L	1	18.18	0.20
OV	ETHYLBENZENE	4.1	UG/L	2.8	37.68	1.30
OV	METHYL TERT-BUTYL ETHER	8.5	UG/L	8.2	3.59	0.30
OV	TOLUENE	0.6 l	UG/L	0.55 l	8.70	0.05
OV	TOTAL XYLENES	16.6	UG/L	12.7	26.62	3.90
PAH	1-METHYLNAPHTHALENE	0.58 l	UG/L	0.57 l	1.74	0.01
PAH	2-METHYLNAPHTHALENE	0.63 l	UG/L	0.63 l	0.00	0.00
PAH	NAPHTHALENE	1.2	UG/L	1.1	8.70	0.10
PET	TPH (C08-C40)	0.325	MG/L	0.289	11.73	0.04

C.H.L. 2 & R.  
J

Current RPD Quality Control Limit: 30 %.

Shaded cells indicate RPDs that exceed the applicable quality control limit.



## Sample Summary

Tetra Tech NUS

Job No: F57467

NAS Key West, Key West, FL  
Project No: 112G00979 PO# 1032274

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
F57467-1	05/12/08	00:00 GB	05/13/08	AQ	Ground Water	KWSM-FD-01-0508
F57467-2	05/12/08	09:09 GB	05/13/08	AQ	Ground Water	KWSMMW-04-0508
F57467-3	05/12/08	11:56 GB	05/13/08	AQ	Ground Water	KWSMMW-05-0508
F57467-4	05/12/08	10:03 GB	05/13/08	AQ	Ground Water	KWSMMW-06-0508
F57467-5	05/12/08	11:07 GB	05/13/08	AQ	Ground Water	KWSMMW-07-0508
F57467-6	05/12/08	13:45 GB	05/13/08	AQ	Ground Water	KWSMMW-08-0508
F57467-7	05/12/08	14:45 GB	05/13/08	AQ	Ground Water	KWSMMW-09D-0508



TETRA TECH NUS, INC

CHAIN OF CUSTODY  
NUMBER: ED00000076-1

F57467

Project No: 112G00979	Facility: KEY WEST NAS	Project Manager: Chuck Bryan	Carrier: Federal Express	Laboratory Name: Accutest Laboratories Southeast 4405 Vineland Road Orlando, FL 32811
Task No: 0095	Turn Around Time: Standard	Field Ops Leader: Gary Braganza	Carrier/Waybill No.	Point of Contact: Jean Smith 407-425-6700

Date	Sample ID #	Time	Analysis	Loc ID	Matrix	Description	Preservative	Container Count	Container Type	Container Reqs	Comments
05/12/2008	KWSM-FD-01-0508	00:00	SW-846 8270C SIM	QC	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSM-FD-01-0508	00:00	FL-PRO	QC	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSM-FD-01-0508	00:00	SW-846 6030B/8260	QC	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-04-0508	09:09	SW-846 8270C SIM	KWSMMW-04	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSMMW-04-0508	09:09	SW-846 6030B/8260	KWSMMW-04	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-04-0508	09:09	FL-PRO	KWSMMW-04	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-05-0508	11:58	FL-PRO	KWSMMW-05	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-05-0508	11:56	SW-846 6030B/8260	KWSMMW-05	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-05-0508	11:56	SW-846 8270C SIM	KWSMMW-05	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSMMW-06-0508	10:03	SW-846 8270C SIM	KWSMMW-06	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSMMW-06-0508	10:03	SW-846 6030B/8260	KWSMMW-06	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-06-0508	10:03	FL-PRO	KWSMMW-06	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-07-0508	11:07	SW-846 8270C SIM	KWSMMW-07	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSMMW-07-0508	11:07	SW-846 6030B/8260	KWSMMW-07	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-07-0508	11:07	FL-PRO	KWSMMW-07	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-08-0508	13:45	SW-846 8270C SIM	KWSMMW-08	GW	PAHs	4°C	2	Glass - Amber	1L	
05/12/2008	KWSMMW-08-0508	13:45	FL-PRO	KWSMMW-08	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-08-0508	13:45	SW-846 6030B/8260	KWSMMW-08	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-09D-0508	14:45	FL-PRO	KWSMMW-09D	GW	TRPH	4°C/H2SO4	2	Glass - Amber	1L	
05/12/2008	KWSMMW-09D-0508	14:45	SW-846 6030B/8260	KWSMMW-09D	GW	VOCs (incl BTEX + MTBE)	4°C/HCL	3	Glass - Clear	40ml vials	
05/12/2008	KWSMMW-09D-0508	14:45	SW-846 8270C SIM	KWSMMW-09D	GW	PAHs	4°C	2	Glass - Amber	1L	

1. Relinquished By: Gary Braganza	Date: 05/12/2008	Time: 17:00	Received By: Federal Express	Date: 05/12/2008	Time: 17:00
2. Relinquished By: FK	Date:	Time:	Received By: J Coral	Date: 5-13-08	Time: 09:00

1.2 1.8 2.4

F57467: Chain of Custody

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ACCUTEST  
F57467 Laboratories

# ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F57467  
 DATE/TIME RECEIVED: 5-13-08 09:00  
 METHOD OF DELIVERY: FEDEX UPS  
 AIRBILL NUMBERS: 8661 5823 6931

CLIENT: TETRA TECH NUS PROJECT: 112600979  
 # OF COOLERS RECEIVED: 3 COOLER TEMPS: 1.2 1.8 2.4  
 ACCUTEST COURIER GREYHOUND DELIVERY OTHER

## COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT OR NOT INTACT
- ☐ CHAIN OF CUSTODY NOT RECEIVED (COC)
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET
- ☐ WET ICE RECEIVED IN COOLER

## TRIP BLANK INFORMATION

- ☐ TRIP BLANK PROVIDED
- ☐ TRIP BLANK NOT PROVIDED
- ☐ TRIP BLANK NOT ON COC
- ☐ TRIP BLANK INTACT
- ☐ TRIP BLANK NOT INTACT
- ☐ RECEIVED WATER TRIP BLANK
- ☐ RECEIVED SOIL TRIP BLANK

## MISC. INFORMATION

NUMBER OF ENCORES ? \_\_\_\_\_  
 NUMBER OF 5035 FIELD KITS ? \_\_\_\_\_  
 NUMBER OF LAB FILTERED METALS ? \_\_\_\_\_

SUMMARY OF COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## SAMPLE INFORMATION

- ☐ SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- ☐ CORRECT NUMBER OF CONTAINERS USED
- ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
- ☐ INSUFFICIENT VOLUME FOR ANALYSIS
- ☐ TIMES ON COC DOES NOT MATCH LABEL(S)
- ☐ ID'S ON COC DOES NOT MATCH LABEL(S)
- ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- ☐ UNCLEAR FILTERING INSTRUCTIONS
- ☐ UNCLEAR COMPOSITING INSTRUCTIONS
- ☐ SAMPLE CONTAINER(S) RECEIVED BROKEN
- ☐ % SOLIDS JAR NOT RECEIVED
- ☐ 5035 FIELD KIT NOT FROZEN WITHIN 48 HOUR'S
- ☐ RESIDUAL CHLORINE PRESENT

( APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TECHNICIAN SIGNATURE/DATE se 5-13-08 TECHNICIAN SIGNATURE/DATE F.M 5-13-08 ASBD 12/17/07

4.1  
4



# Volatile Surrogate Recovery Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F57467-1	J038563.D	96.0	97.0	104.0	105.0
F57467-2	M0027533.D	102.0	103.0	107.0	108.0
F57467-3	M0027534.D	102.0	104.0	107.0	106.0
F57467-4	M0027517.D	98.0	102.0	108.0	104.0
F57467-5	M0027518.D	98.0	103.0	106.0	104.0
F57467-6	M0027519.D	96.0	102.0	106.0	99.0
F57467-7	M0027520.D	97.0	103.0	106.0	102.0
F57465-2MS	J038552.D	98.0	98.0	99.0	103.0
F57465-2MSD	J038553.D	99.0	98.0	100.0	102.0
F57492-1MS	M0027531.D	100.0	103.0	97.0	101.0
F57492-1MSD	M0027532.D	102.0	102.0	97.0	101.0
F57606-1MS	M0027503.D	101.0	101.0	99.0	102.0
F57606-1MSD	M0027504.D	100.0	101.0	100.0	102.0
VJ2472-BS	J038537.D	100.0	100.0	101.0	102.0
VJ2472-MB	J038538.D	97.0	97.0	108.0	113.0
VM1133-BS	M0027497.D	101.0	99.0	103.0	105.0
VM1133-MB	M0027498.D	99.0	98.0	106.0	110.0
VM1134-BS	M0027524.D	101.0	102.0	102.0	100.0
VM1134-MB	M0027525.D	101.0	101.0	106.0	105.0

Surrogate  
Compounds

Recovery  
Limits

S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: F57467

Account: TETRAPPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57465-2MS	J038552.D	5	05/23/08	KW	n/a	n/a	VJ2472
F57465-2MSD	J038553.D	5	05/23/08	KW	n/a	n/a	VJ2472
F57465-2	J038551.D	5	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	F57465-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	100 U		625	644	103	623	100	3	33-157/21
107-13-1	Acrylonitrile	50 U		625	825	132*	825	132*	0	62-124/13
71-43-2	Benzene	2.2	I	125	136	107	135	106	1	83-124/11
75-27-4	Bromodichloromethane	5.0 U		125	116	93	114	91	2	76-116/10
75-25-2	Bromoform	5.0 U		125	109	87	109	87	0	68-128/11
108-90-7	Chlorobenzene	5.0 U		125	134	107	134	107	0	87-115/9
75-00-3	Chloroethane	10 U		125	118	94	117	94	1	54-166/20
67-66-3	Chloroform	5.0 U		125	145	116	147	118	1	85-123/10
110-75-8	2-Chloroethyl vinyl ether	25 U		625	ND	0*	ND	0*	nc	63-125/24
56-23-5	Carbon tetrachloride	5.0 U		125	140	112	138	110	1	74-139/13
75-34-3	1,1-Dichloroethane	5.0 U		125	137	110	136	109	1	82-127/10
75-35-4	1,1-Dichloroethylene	5.0 U		125	128	102	127	102	1	75-133/13
107-06-2	1,2-Dichloroethane	5.0 U		125	121	97	120	96	1	76-122/11
78-87-5	1,2-Dichloropropane	5.0 U		125	123	98	124	99	1	81-120/11
124-48-1	Dibromochloromethane	5.0 U		125	113	90	114	91	1	74-116/11
75-71-8	Dichlorodifluoromethane	10 U		125	84.5	68	82.0	66	3	34-158/22
156-59-2	cis-1,2-Dichloroethylene	5.0 U		125	124	99	126	101	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	5.0 U		125	114	91	112	90	2	83-119/10
541-73-1	m-Dichlorobenzene	5.0 U		125	121	97	122	98	1	86-115/9
95-50-1	o-Dichlorobenzene	5.0 U		125	118	94	119	95	1	85-115/9
106-46-7	p-Dichlorobenzene	5.0 U		125	118	94	119	95	1	87-113/10
156-60-5	trans-1,2-Dichloroethylene	5.0 U		125	132	106	131	105	1	82-126/10
10061-02-6	trans-1,3-Dichloropropene	5.0 U		125	115	92	116	93	1	87-123/10
100-41-4	Ethylbenzene	304		125	436	106	438	107	0	87-118/10
74-83-9	Methyl bromide	10 U		125	101	81	100	80	1	55-151/21
74-87-3	Methyl chloride	10 U		125	117	94	115	92	2	55-173/22
75-09-2	Methylene chloride	10.5	IV	125	122	89	121	88	1	69-125/11
1634-04-4	Methyl Tert Butyl Ether	5.0 U		125	109	87	109	87	0	75-116/10
71-55-6	1,1,1-Trichloroethane	5.0 U		125	134	107	134	107	0	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U		125	115	92	118	94	3	71-120/11
79-00-5	1,1,2-Trichloroethane	5.0 U		125	133	106	134	107	1	80-114/11
127-18-4	Tetrachloroethylene	5.0 U		125	129	103	130	104	1	80-131/12
108-88-3	Toluene	1.5	I	125	133	105	136	108	2	86-116/10
79-01-6	Trichloroethylene	5.0 U		125	128	102	127	102	1	85-124/10
75-69-4	Trichlorofluoromethane	10 U		125	58.1	46*	58.4	47*	1	66-156/15
75-01-4	Vinyl chloride	5.0 U		125	107	86	107	86	0	57-153/22

# Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57465-2MS	J038552.D	5	05/23/08	KW	n/a	n/a	VJ2472
F57465-2MSD	J038553.D	5	05/23/08	KW	n/a	n/a	VJ2472
F57465-2	J038551.D	5	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	F57465-2 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	205		375	605	107	607	107	0	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F57465-2	Limits
1868-53-7	Dibromofluoromethane	98%	99%	97%	87-116%
17060-07-0	1,2-Dichloroethane-D4	98%	98%	95%	76-127%
2037-26-5	Toluene-D8	99%	100%	102%	86-112%
460-00-4	4-Bromofluorobenzene	103%	102%	106%	84-120%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57606-1MS	M0027503.D 1		05/23/08	MM	n/a	n/a	VM1133
F57606-1MSD	M0027504.D 1		05/23/08	MM	n/a	n/a	VM1133
F57606-1	M0027500.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	F57606-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	20 U		125	48.9	39	45.7	37	7	33-157/21
107-13-1	Acrylonitrile	10 U		125	120	96	120	96	0	62-124/13
71-43-2	Benzene	1.0 U		25	28.1	112	27.8	111	1	83-124/11
75-27-4	Bromodichloromethane	1.0 U		25	25.4	102	25.3	101	0	76-116/10
75-25-2	Bromoform	1.0 U		25	24.3	97	24.8	99	2	68-128/11
108-90-7	Chlorobenzene	1.0 U		25	27.3	109	27.0	108	1	87-115/9
75-00-3	Chloroethane	2.0 U		25	29.6	118	28.9	116	2	54-166/20
67-66-3	Chloroform	1.0 U		25	28.3	113	28.0	112	1	85-123/10
110-75-8	2-Chloroethyl vinyl ether	5.0 U		125	ND	0*	ND	0*	nc	63-125/24
56-23-5	Carbon tetrachloride	1.0 U		25	31.6	126	31.1	124	2	74-139/13
75-34-3	1,1-Dichloroethane	1.0 U		25	29.6	118	29.1	116	2	82-127/10
75-35-4	1,1-Dichloroethylene	1.0 U		25	28.8	115	28.2	113	2	75-133/13
107-06-2	1,2-Dichloroethane	1.0 U		25	25.7	103	25.4	102	1	76-122/11
78-87-5	1,2-Dichloropropane	1.0 U		25	26.7	107	26.7	107	0	81-120/11
124-48-1	Dibromochloromethane	1.0 U		25	25.3	101	26.0	104	3	74-116/11
75-71-8	Dichlorodifluoromethane	2.0 U		25	42.6	170*	42.0	168*	1	34-158/22
156-59-2	cis-1,2-Dichloroethylene	9.4		25	35.3	104	35.4	104	0	81-114/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		25	27.3	109	27.4	110	0	83-119/10
541-73-1	m-Dichlorobenzene	1.0 U		25	27.6	110	27.7	111	0	86-115/9
95-50-1	o-Dichlorobenzene	1.0 U		25	26.7	107	27.0	108	1	85-115/9
106-46-7	p-Dichlorobenzene	1.0 U		25	27.1	108	27.2	109	0	87-113/10
156-60-5	trans-1,2-Dichloroethylene	1.0 U		25	29.7	119	28.9	116	3	82-126/10
10061-02-6	trans-1,3-Dichloropropene	1.0 U		25	28.4	114	28.7	115	1	87-123/10
100-41-4	Ethylbenzene	1.0 U		25	28.3	113	27.8	111	2	87-118/10
74-83-9	Methyl bromide	2.0 U		25	32.5	130	29.5	118	10	55-151/21
74-87-3	Methyl chloride	2.0 U		25	34.0	136	34.6	138	2	55-173/22
75-09-2	Methylene chloride	5.0 U		25	25.4	102	24.7	99	3	69-125/11
1634-04-4	Methyl Tert Butyl Ether	1.0 U		25	22.8	91	23.3	93	2	75-116/10
71-55-6	1,1,1-Trichloroethane	1.0 U		25	30.4	122	30.2	121	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		25	25.8	103	25.9	104	0	71-120/11
79-00-5	1,1,2-Trichloroethane	1.0 U		25	24.6	98	24.7	99	0	80-114/11
127-18-4	Tetrachloroethylene	1.0 U		25	30.2	121	29.8	119	1	80-131/12
108-88-3	Toluene	0.36	I	25	28.6	113	28.8	114	1	86-116/10
79-01-6	Trichloroethylene	0.99	I	25	28.9	112	28.7	111	1	85-124/10
75-69-4	Trichlorofluoromethane	2.0 U		25	30.7	123	30.4	122	1	66-156/15
75-01-4	Vinyl chloride	1.0 U		25	30.2	121	31.2	125	3	57-153/22

# Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57606-1MS	M0027503.D 1		05/23/08	MM	n/a	n/a	VM1133
F57606-1MSD	M0027504.D 1		05/23/08	MM	n/a	n/a	VM1133
F57606-1	M0027500.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	F57606-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	3.0 U		75	82.7	110	82.4	110	0	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F57606-1	Limits
1868-53-7	Dibromofluoromethane	101%	100%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	101%	101%	100%	76-127%
2037-26-5	Toluene-D8	99%	100%	107%	86-112%
460-00-4	4-Bromofluorobenzene	102%	102%	107%	84-120%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57492-1MS	M0027531.D 5		05/24/08	MM	n/a	n/a	VM1134
F57492-1MSD	M0027532.D 5		05/24/08	MM	n/a	n/a	VM1134
F57492-1	M0027527.D 1		05/24/08	MM	n/a	n/a	VM1134
F57492-1	M0027530.D 5		05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	F57492-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	20 U		625	186	30*	204	33	9	33-157/21
107-13-1	Acrylonitrile	10 U		625	612	98	599	96	2	62-124/13
71-43-2	Benzene	2.9		125	132	103	135	106	2	83-124/11
75-27-4	Bromodichloromethane	1.0 U		125	121	97	124	99	2	76-116/10
75-25-2	Bromoform	1.0 U		125	110	88	115	92	4	68-128/11
108-90-7	Chlorobenzene	170 a		125	314	115	319	119*	2	87-115/9
75-00-3	Chloroethane	2.0 U		125	142	114	134	107	6	54-166/20
67-66-3	Chloroform	1.0 U		125	132	106	136	109	3	85-123/10
110-75-8	2-Chloroethyl vinyl ether	5.0 U		625	34.6	6*	12.2	2*	96*	63-125/24
56-23-5	Carbon tetrachloride	1.0 U		125	147	118	149	119	1	74-139/13
75-34-3	1,1-Dichloroethane	1.0 U		125	138	110	142	114	3	82-127/10
75-35-4	1,1-Dichloroethylene	1.0 U		125	139	111	141	113	1	75-133/13
107-06-2	1,2-Dichloroethane	1.0 U		125	120	96	124	99	3	76-122/11
78-87-5	1,2-Dichloropropane	1.0 U		125	126	101	129	103	2	81-120/11
124-48-1	Dibromochloromethane	1.0 U		125	114	91	121	97	6	74-116/11
75-71-8	Dichlorodifluoromethane	2.0 U		125	160	128	173	138	8	34-158/22
156-59-2	cis-1,2-Dichloroethylene	1.0 U		125	120	96	124	99	3	81-114/10
10061-01-5	cis-1,3-Dichloropropene	1.0 U		125	126	101	129	103	2	83-119/10
541-73-1	m-Dichlorobenzene	5.0		125	129	99	132	102	2	86-115/9
95-50-1	o-Dichlorobenzene	1.7		125	124	98	126	99	2	85-115/9
106-46-7	p-Dichlorobenzene	5.0		125	128	98	130	100	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	1.0 U		125	137	110	143	114	4	82-126/10
10061-02-6	trans-1,3-Dichloropropene	1.0 U		125	127	102	129	103	2	87-123/10
100-41-4	Ethylbenzene	0.20	I	125	134	107	136	109	1	87-118/10
74-83-9	Methyl bromide	2.0 U		125	153	122	142	114	7	55-151/21
74-87-3	Methyl chloride	2.0 U		125	147	118	158	126	7	55-173/22
75-09-2	Methylene chloride	5.0 U		125	116	93	118	94	2	69-125/11
1634-04-4	Methyl Tert Butyl Ether	1.0 U		125	107	86	113	90	5	75-116/10
71-55-6	1,1,1-Trichloroethane	1.0 U		125	145	116	144	115	1	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U		125	117	94	125	100	7	71-120/11
79-00-5	1,1,2-Trichloroethane	1.0 U		125	113	90	114	91	1	80-114/11
127-18-4	Tetrachloroethylene	1.0 U		125	136	109	137	110	1	80-131/12
108-88-3	Toluene	1.0 U		125	129	103	131	105	2	86-116/10
79-01-6	Trichloroethylene	1.0 U		125	132	106	129	103	2	85-124/10
75-69-4	Trichlorofluoromethane	2.0 U		125	144	115	144	115	0	66-156/15
75-01-4	Vinyl chloride	1.0 U		125	132	106	141	113	7	57-153/22

# Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57492-1MS	M0027531.D	5	05/24/08	MM	n/a	n/a	VM1134
F57492-1MSD	M0027532.D	5	05/24/08	MM	n/a	n/a	VM1134
F57492-1	M0027527.D	1	05/24/08	MM	n/a	n/a	VM1134
F57492-1	M0027530.D	5	05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	F57492-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	3.0 U	375	375	100	380	101	1	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F57492-1	F57492-1	Limits
1868-53-7	Dibromofluoromethane	100%	102%	101%	98%	87-116%
17060-07-0	1,2-Dichloroethane-D4	103%	102%	102%	99%	76-127%
2037-26-5	Toluene-D8	97%	97%	88%	104%	86-112%
460-00-4	4-Bromofluorobenzene	101%	101%	103%	107%	84-120%

(a) Result is from Run #2.

## Blank Spike Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2472-BS	J038537.D	1	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-02-8	Acrolein	125	56.4	45	33-157
107-13-1	Acrylonitrile	125	156	125*	62-124
71-43-2	Benzene	25	28.1	112	83-124
75-27-4	Bromodichloromethane	25	25.2	101	76-116
75-25-2	Bromoform	25	24.7	99	68-128
108-90-7	Chlorobenzene	25	26.4	106	87-115
75-00-3	Chloroethane	25	26.6	106	54-166
67-66-3	Chloroform	25	27.3	109	85-123
110-75-8	2-Chloroethyl vinyl ether	125	118	94	63-125
56-23-5	Carbon tetrachloride	25	27.7	111	74-139
75-34-3	1,1-Dichloroethane	25	28.8	115	82-127
75-35-4	1,1-Dichloroethylene	25	27.5	110	75-133
107-06-2	1,2-Dichloroethane	25	26.3	105	76-122
78-87-5	1,2-Dichloropropane	25	27.2	109	81-120
124-48-1	Dibromochloromethane	25	25.4	102	74-116
75-71-8	Dichlorodifluoromethane	25	21.5	86	34-158
156-59-2	cis-1,2-Dichloroethylene	25	26.6	106	81-114
10061-01-5	cis-1,3-Dichloropropene	25	27.0	108	83-119
541-73-1	m-Dichlorobenzene	25	26.2	105	86-115
95-50-1	o-Dichlorobenzene	25	24.9	100	85-115
106-46-7	p-Dichlorobenzene	25	25.1	100	87-113
156-60-5	trans-1,2-Dichloroethylene	25	27.8	111	82-126
10061-02-6	trans-1,3-Dichloropropene	25	28.0	112	87-123
100-41-4	Ethylbenzene	25	27.6	110	87-118
74-83-9	Methyl bromide	25	26.1	104	55-151
74-87-3	Methyl chloride	25	24.8	99	55-173
75-09-2	Methylene chloride	25	25.2	101	69-125
1634-04-4	Methyl Tert Butyl Ether	25	23.3	93	75-116
71-55-6	1,1,1-Trichloroethane	25	28.8	115	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	24.3	97	71-120
79-00-5	1,1,2-Trichloroethane	25	25.3	101	80-114
127-18-4	Tetrachloroethylene	25	26.9	108	80-131
108-88-3	Toluene	25	28.1	112	86-116
79-01-6	Trichloroethylene	25	27.3	109	85-124
75-69-4	Trichlorofluoromethane	25	27.6	110	66-156
75-01-4	Vinyl chloride	25	25.2	101	57-153



## Blank Spike Summary

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Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2472-BS	J038537.D	1	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1330-20-7	Xylene (total)	75	85.4	114	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	100%	76-127%
2037-26-5	Toluene-D8	101%	86-112%
460-00-4	4-Bromofluorobenzene	102%	84-120%

5.2

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## Blank Spike Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1133-BS	M0027497.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-02-8	Acrolein	125	47.2	38	33-157
107-13-1	Acrylonitrile	125	119	95	62-124
71-43-2	Benzene	25	24.7	99	83-124
75-27-4	Bromodichloromethane	25	24.0	96	76-116
75-25-2	Bromoform	25	25.1	100	68-128
108-90-7	Chlorobenzene	25	25.3	101	87-115
75-00-3	Chloroethane	25	19.1	76	54-166
67-66-3	Chloroform	25	25.8	103	85-123
110-75-8	2-Chloroethyl vinyl ether	125	117	94	63-125
56-23-5	Carbon tetrachloride	25	25.7	103	74-139
75-34-3	1,1-Dichloroethane	25	25.9	104	82-127
75-35-4	1,1-Dichloroethylene	25	20.3	81	75-133
107-06-2	1,2-Dichloroethane	25	24.4	98	76-122
78-87-5	1,2-Dichloropropane	25	24.3	97	81-120
124-48-1	Dibromochloromethane	25	26.0	104	74-116
75-71-8	Dichlorodifluoromethane	25	29.7	119	34-158
156-59-2	cis-1,2-Dichloroethylene	25	24.1	96	81-114
10061-01-5	cis-1,3-Dichloropropene	25	25.5	102	83-119
541-73-1	m-Dichlorobenzene	25	26.2	105	86-115
95-50-1	o-Dichlorobenzene	25	25.9	104	85-115
106-46-7	p-Dichlorobenzene	25	25.6	102	87-113
156-60-5	trans-1,2-Dichloroethylene	25	25.2	101	82-126
10061-02-6	trans-1,3-Dichloropropene	25	28.4	114	87-123
100-41-4	Ethylbenzene	25	24.9	100	87-118
74-83-9	Methyl bromide	25	19.7	79	55-151
74-87-3	Methyl chloride	25	27.5	110	55-173
75-09-2	Methylene chloride	25	24.9	100	69-125
1634-04-4	Methyl Tert Butyl Ether	25	23.2	93	75-116
71-55-6	1,1,1-Trichloroethane	25	25.2	101	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	26.2	105	71-120
79-00-5	1,1,2-Trichloroethane	25	24.9	100	80-114
127-18-4	Tetrachloroethylene	25	26.0	104	80-131
108-88-3	Toluene	25	25.9	104	86-116
79-01-6	Trichloroethylene	25	23.9	96	85-124
75-69-4	Trichlorofluoromethane	25	19.5	78	66-156
75-01-4	Vinyl chloride	25	22.3	89	57-153

## Blank Spike Summary

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Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1133-BS	M0027497.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1330-20-7	Xylene (total)	75	75.1	100	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	99%	76-127%
2037-26-5	Toluene-D8	103%	86-112%
460-00-4	4-Bromofluorobenzene	105%	84-120%

5.2  
5

## Blank Spike Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1134-BS	M0027524.D 1		05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-02-8	Acrolein	125	45.2	36	33-157
107-13-1	Acrylonitrile	125	124	99	62-124
71-43-2	Benzene	25	26.0	104	83-124
75-27-4	Bromodichloromethane	25	25.3	101	76-116
75-25-2	Bromoform	25	24.8	99	68-128
108-90-7	Chlorobenzene	25	26.3	105	87-115
75-00-3	Chloroethane	25	22.3	89	54-166
67-66-3	Chloroform	25	26.7	107	85-123
110-75-8	2-Chloroethyl vinyl ether	125	123	98	63-125
56-23-5	Carbon tetrachloride	25	26.4	106	74-139
75-34-3	1,1-Dichloroethane	25	27.4	110	82-127
75-35-4	1,1-Dichloroethylene	25	24.8	99	75-133
107-06-2	1,2-Dichloroethane	25	25.4	102	76-122
78-87-5	1,2-Dichloropropane	25	25.8	103	81-120
124-48-1	Dibromochloromethane	25	25.9	104	74-116
75-71-8	Dichlorodifluoromethane	25	21.7	87	34-158
156-59-2	cis-1,2-Dichloroethylene	25	24.6	98	81-114
10061-01-5	cis-1,3-Dichloropropene	25	26.8	107	83-119
541-73-1	m-Dichlorobenzene	25	25.9	104	86-115
95-50-1	o-Dichlorobenzene	25	25.7	103	85-115
106-46-7	p-Dichlorobenzene	25	25.9	104	87-113
156-60-5	trans-1,2-Dichloroethylene	25	26.2	105	82-126
10061-02-6	trans-1,3-Dichloropropene	25	28.4	114	87-123
100-41-4	Ethylbenzene	25	26.0	104	87-118
74-83-9	Methyl bromide	25	27.4	110	55-151
74-87-3	Methyl chloride	25	27.9	112	55-173
75-09-2	Methylene chloride	25	24.2	97	69-125
1634-04-4	Methyl Tert Butyl Ether	25	23.5	94	75-116
71-55-6	1,1,1-Trichloroethane	25	26.6	106	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	25.5	102	71-120
79-00-5	1,1,2-Trichloroethane	25	25.3	101	80-114
127-18-4	Tetrachloroethylene	25	26.2	105	80-131
108-88-3	Toluene	25	26.8	107	86-116
79-01-6	Trichloroethylene	25	25.2	101	85-124
75-69-4	Trichlorofluoromethane	25	19.1	76	66-156
75-01-4	Vinyl chloride	25	21.1	84	57-153

## Blank Spike Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1134-BS	M0027524.D	1	05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1330-20-7	Xylene (total)	75	76.7	102	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	102%	76-127%
2037-26-5	Toluene-D8	102%	86-112%
460-00-4	4-Bromofluorobenzene	100%	84-120%

## Method Blank Summary

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Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2472-MB	J038538.D	1	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	20	9.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.46	ug/l	
67-66-3	Chloroform	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.38	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.34	ug/l	

## Method Blank Summary

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Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2472-MB	J038538.D	1	05/23/08	KW	n/a	n/a	VJ2472

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-1

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 87-116%
17060-07-0	1,2-Dichloroethane-D4	97% 76-127%
2037-26-5	Toluene-D8	108% 86-112%
460-00-4	4-Bromofluorobenzene	113% 84-120%

## Method Blank Summary

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Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1133-MB	M0027498.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	20	9.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.46	ug/l	
67-66-3	Chloroform	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.6	5.0	1.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.34	ug/l	



## Method Blank Summary

Page 2 of 2

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1133-MB	M0027498.D 1		05/23/08	MM	n/a	n/a	VM1133

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 87-116%
17060-07-0	1,2-Dichloroethane-D4	98% 76-127%
2037-26-5	Toluene-D8	106% 86-112%
460-00-4	4-Bromofluorobenzene	110% 84-120%

## Method Blank Summary

Page 1 of 2

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1134-MB	M0027525.D 1		05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	20	9.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.46	ug/l	
67-66-3	Chloroform	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.38	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.34	ug/l	

## Method Blank Summary

Page 2 of 2

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1134-MB	M0027525.D 1		05/24/08	MM	n/a	n/a	VM1134

The QC reported here applies to the following samples:

Method: SW846 8260B

F57467-2, F57467-3

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101% 87-116%
17060-07-0	1,2-Dichloroethane-D4	101% 76-127%
2037-26-5	Toluene-D8	106% 86-112%
460-00-4	4-Bromofluorobenzene	105% 84-120%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile <sup>a</sup>		0	ug/l	

(a) No TICs detected.

## Instrument Performance Check (BFB)

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VJ2469-BFB	Injection Date: 05/20/08
Lab File ID: J038436.D	Injection Time: 09:49
Instrument ID: GCMSJ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	22669	21.0	Pass
75	30.0 - 60.0% of mass 95	54843	50.8	Pass
95	Base peak, 100% relative abundance	108053	100.0	Pass
96	5.0 - 9.0% of mass 95	7326	6.8	Pass
173	Less than 2.0% of mass 174	503	0.47 (0.6) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	83850	77.6	Pass
175	5.0 - 9.0% of mass 174	6001	5.6 (7.2) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	80992	75.0 (96.6) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	5347	4.9 (6.6) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2469-ICC2469	J038438.D	05/20/08	10:36	00:47	Initial cal 4
VJ2469-IC2469	J038439.D	05/20/08	11:05	01:16	Initial cal 1
VJ2469-IC2469	J038440.D	05/20/08	11:30	01:41	Initial cal 2
VJ2469-IC2469	J038441.D	05/20/08	11:54	02:05	Initial cal 3
VJ2469-IC2469	J038442.D	05/20/08	12:19	02:30	Initial cal 5
VJ2469-IC2469	J038443.D	05/20/08	12:44	02:55	Initial cal 6
VJ2469-ICV2469	J038444.D	05/20/08	13:08	03:19	Initial cal verification 4

## Initial Calibration Summary

Page 1 of 3

Job Number: F57467  
 Account: TETRAPPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VJ2469-ICC2469  
 Lab FileID: J038438.D

## Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Tue May 20 13:05:34 2008  
 Response via : Initial Calibration

## Calibration Files

1 =J038439.D 2 =J038440.D 3 =J038441.D 4 =J038438.D  
 5 =J038442.D 6 =J038443.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----							
2) Dichlorodifluoromet	0.165	0.196	0.210	0.204	0.205	0.200	0.197	8.30
3) P Chloromethane	0.444	0.368	0.403	0.385	0.382	0.360	0.390	7.78
4) C Vinyl Chloride	0.348	0.382	0.402	0.378	0.382	0.369	0.377	4.72
5) Bromomethane	0.284	0.252	0.253	0.246	0.242	0.241	0.253	6.28
6) Chloroethane	0.218	0.222	0.231	0.241	0.226	0.221	0.227	3.71
7) Trichlorofluorometh	0.385	0.441	0.486	0.486	0.454	0.442	0.449	8.32
8) Ethyl Ether	0.328	0.327	0.345	0.345	0.360	0.352	0.343	3.79
9) 1,2-Dichlorotrifluo	0.426	0.402	0.421	0.413	0.412	0.396	0.412	2.80
10) C 1,1-Dichloroethene	0.404	0.446	0.487	0.487	0.473	0.461	0.460	6.86
11) Freon 113	0.434	0.331	0.315	0.303	0.303	0.298	0.331	15.69
---- Linear regr., Force(0,0) ---- Coefficient = 0.9999								
Response Ratio = 0.00000 + 0.30010 *A								
12) Carbon Disulfide	1.058	1.043	1.112	1.079	1.067	1.057	1.069	2.23
13) Iodomethane	0.461	0.513	0.566	0.552	0.576	0.587	0.543	8.71
14) Methylene Chloride	1.221	0.492	0.428	0.400	0.411	0.402	0.559	58.36
---- Linear regr., Force(0,0) ---- Coefficient = 0.9996								
Response Ratio = 0.00000 + 0.40533 *A								
15) Acetone	0.045	0.033	0.032	0.034	0.032	0.031	0.034	14.76
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997								
Response Ratio = 0.00000 + 0.03537 *A + -0.00046 *A^2								
16) Methyl acetate	0.044	0.041	0.047	0.046	0.047	0.049	0.046	5.83
17) trans-1,2-Dichloroe	0.321	0.365	0.409	0.418	0.407	0.420	0.390	10.13
18) Hexane	0.260	0.255	0.278	0.292	0.267	0.273	0.271	4.94
19) Methyl Tert Butyl E	0.775	0.748	0.804	0.828	0.850	0.850	0.809	5.13
20) Di-isopropyl ether	0.889	0.916	1.036	1.039	1.065	1.058	1.001	7.70
21) P 1,1-Dichloroethane	0.401	0.457	0.502	0.503	0.501	0.503	0.478	8.72
22) Acrylonitrile	0.085	0.084	0.083	0.085	0.086	0.084	0.085	1.42
23) ETBE	0.788	0.845	0.934	0.943	0.976	0.975	0.910	8.42
24) Vinyl acetate	0.130	0.130	0.131	0.145	0.134	0.132	0.134	4.20
25) cis-1,2-Dichloroeth	0.231	0.257	0.284	0.290	0.294	0.299	0.276	9.56
26) 2,2-Dichloropropane	0.326	0.364	0.391	0.406	0.386	0.388	0.377	7.47
27) Bromochloromethane	0.141	0.150	0.170	0.171	0.180	0.186	0.166	10.51
28) Cyclohexane	0.382	0.448	0.507	0.520	0.508	0.520	0.481	11.49
29) C Chloroform	0.426	0.451	0.504	0.500	0.507	0.516	0.484	7.55
30) Tetrahydrofuran	0.152	0.093	0.087	0.087	0.088	0.085	0.099	26.67
---- Linear regr., Force(0,0) ---- Coefficient = 0.9997								
Response Ratio = 0.00000 + 0.08629 *A								
31) S Dibromofluoromethan	0.262	0.260	0.258	0.261	0.269	0.271	0.264	1.96
32) Carbon Tetrachlorid	0.269	0.309	0.339	0.347	0.340	0.349	0.326	9.54
33) 1,1,1-Trichloroetha	0.310	0.371	0.397	0.407	0.398	0.409	0.382	9.84
34) 2-Butanone	0.150	0.135	0.143	0.152	0.145	0.140	0.144	4.53

## Initial Calibration Summary

Page 2 of 3

Job Number: F57467  
 Account: TETRAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VJ2469-ICC2469  
 Lab FileID: J038438.D

35)	1,1-Dichloropropene	0.303	0.344	0.387	0.398	0.383	0.393	0.368	10.10
36)	Benzene	0.921	0.967	1.087	1.103	1.089	1.099	1.045	7.60
37)	TAME	0.664	0.659	0.718	0.717	0.752	0.750	0.710	5.72
38) S	1,2-Dichloroethane-	0.317	0.321	0.326	0.335	0.346	0.319	0.327	3.40
39)	1,2-Dichloroethane	0.343	0.362	0.401	0.396	0.403	0.402	0.385	6.66
40)	Trichloroethene	0.235	0.248	0.282	0.288	0.286	0.297	0.273	9.17
41)	Methylcyclohexane	0.342	0.380	0.436	0.452	0.442	0.454	0.418	11.03
42)	Dibromomethane	0.155	0.154	0.169	0.175	0.181	0.180	0.169	7.21
43) C	1,2-Dichloropropane	0.252	0.264	0.304	0.304	0.312	0.315	0.292	9.15
44)	Bromodichloromethan	0.323	0.337	0.380	0.384	0.403	0.404	0.372	9.19
45)	2-Chloroethyl vinyl	0.142	0.153	0.180	0.189	0.196	0.197	0.176	13.19
46)	cis-1,3-Dichloropro	0.387	0.405	0.465	0.472	0.487	0.491	0.451	9.74
47) I	Chlorobenzene-d5	-----ISTD-----							
48) S	Toluene-d8	1.399	1.399	1.358	1.352	1.281	1.262	1.342	4.32
49) C	Toluene	1.285	1.391	1.513	1.519	1.421	1.426	1.426	6.06
50)	2-Nitropropane	0.075	0.076	0.087	0.097	0.093	0.090	0.086	10.40
51)	4-Methyl-2-pentanone	0.390	0.384	0.389	0.391	0.363	0.337	0.376	5.78
52)	trans-1,3-Dichlorop	0.477	0.503	0.553	0.571	0.558	0.556	0.536	6.99
53)	Tetrachloroethene	0.288	0.308	0.344	0.354	0.342	0.370	0.334	9.14
54)	1,1,2-Trichloroetha	0.278	0.284	0.293	0.290	0.287	0.281	0.285	1.97
55)	Dibromochloromethan	0.305	0.328	0.362	0.380	0.378	0.381	0.356	9.01
56)	1,3-Dichloropropane	0.535	0.549	0.595	0.600	0.585	0.573	0.573	4.53
57)	1,2-Dibromoethane	0.287	0.303	0.331	0.338	0.334	0.329	0.320	6.38
58)	2-hexanone	0.296	0.257	0.265	0.274	0.252	0.235	0.263	7.93
59)	1-Chlorohexane	0.354	0.409	0.481	0.500	0.466	0.477	0.448	12.34
60) C	Ethylbenzene	1.508	1.554	1.685	1.707	1.670	1.655	1.630	4.89
61) P	Chlorobenzene	0.839	0.906	0.998	1.021	1.039	1.066	0.978	8.92
62)	1,1,1,2-Tetrachloro	0.278	0.310	0.339	0.345	0.338	0.348	0.326	8.29
63)	m,p-Xylene	1.039	1.139	1.286	1.296	1.241	1.169	1.195	8.26
64)	o-Xylene	1.016	1.149	1.297	1.308	1.263	1.244	1.213	9.21
65)	Styrene	0.748	0.840	0.995	1.020	1.007	1.021	0.939	12.37
66) P	Bromoform	0.193	0.208	0.232	0.244	0.242	0.245	0.227	9.57
67)	Isopropylbenzene	0.998	1.177	1.402	1.417	1.333	1.337	1.277	12.62
68) I	1,4-Dichlorobenzene-d	-----ISTD-----							
69) S	4-Bromofluorobenzen	1.009	0.975	0.938	0.916	0.898	0.875	0.935	5.32
70)	n-Propylbenzene	3.465	3.459	3.791	3.843	3.657	3.553	3.628	4.52
71)	Bromobenzene	0.728	0.738	0.770	0.791	0.825	0.885	0.790	7.42
72) P	1,1,2,2-Tetrachloro	0.923	0.904	0.824	0.823	0.808	0.782	0.844	6.68
73)	1,3,5-Trimethylbenz	2.107	2.279	2.506	2.602	2.606	2.622	2.454	8.68
74)	2-Chlorotoluene	2.344	2.364	2.479	2.541	2.534	2.547	2.468	3.72
75)	trans-1,4-Dichloro-	0.196	0.167	0.194	0.215	0.212	0.207	0.199	8.92
76)	1,2,3-Trichloroprop	0.269	0.238	0.232	0.228	0.225	0.227	0.236	6.95
77)	Cyclohexanone	0.026	0.016	0.015	0.016	0.017	0.015	0.018	23.30
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9984									
Response Ratio = 0.00000 + 0.01688 *A + -0.00013 *A^2									
78)	4-Chlorotoluene	2.051	2.068	2.195	2.206	2.135	2.115	2.128	2.98
79)	tert-Butylbenzene	1.196	1.296	1.421	1.457	1.407	1.406	1.364	7.19
80)	1,2,4-Trimethylbenz	2.147	2.235	2.525	2.581	2.521	2.489	2.416	7.42
81)	sec-Butylbenzene	2.814	2.841	3.181	3.268	3.065	2.996	3.028	5.98
82)	4-Isopropyltoluene	2.138	2.211	2.450	2.613	2.487	2.483	2.397	7.62
83)	1,3-Dichlorobenzene	1.316	1.279	1.326	1.415	1.401	1.423	1.360	4.45
84)	1,4-Dichlorobenzene	1.470	1.413	1.418	1.471	1.465	1.495	1.455	2.24
85)	n-Butylbenzene	1.439	1.323	1.526	1.646	1.573	1.621	1.521	8.02
86)	Benzyl Chloride	0.255	0.284	0.300	0.361	0.349	0.360	0.318	14.04
87)	1,2-Dichlorobenzene	1.379	1.244	1.287	1.348	1.357	1.374	1.331	4.06
88)	1,2-Dibromo-3-Chlor	0.184	0.131	0.122	0.134	0.134	0.131	0.140	15.78
---- Linear regr., Force(0,0) ---- Coefficient = 0.9994									

5.7  
5

# Initial Calibration Summary

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: VJ2469-ICC2469  
Lab FileID: J038438.D

Page 3 of 3

Response Ratio = 0.00000 + 0.13222 \*A

89) Hexachlorobutadiene 0.473 0.321 0.370 0.401 0.383 0.418 0.394 12.88

90) 1,2,4-Trichlorobenz 0.917 0.546 0.635 0.714 0.762 0.797 0.729 17.77

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997

Response Ratio = 0.00000 + 0.64831 \*A + 0.07562 \*A^2

91) Naphthalene 3.196 1.072 1.273 1.460 1.537 1.586 1.687 45.22

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9993

Response Ratio = 0.00000 + 1.34334 \*A + 0.12479 \*A^2

92) 1,2,3-Trichlorobenz 0.827 0.439 0.497 0.558 0.602 0.629 0.592 22.72

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997

Response Ratio = 0.00000 + 0.50737 \*A + 0.06196 \*A^2

93) I Tert Butyl Alcohol-d1 -----ISTD-----

94) acrolein 1.276 0.792 0.659 0.615 0.666 0.684 0.782 31.81

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9995

Response Ratio = 0.00000 + 0.60912 \*A + 0.03763 \*A^2

95) Tert Butyl Alcohol 1.208 1.162 1.090 1.034 1.072 1.118 1.114 5.66

96) tert Amyl alcohol 0.857 0.871 0.830 0.842 0.901 0.938 0.873 4.61

97) 1,4-Dioxane 0.163 0.098 0.103 0.097 0.114 0.113 0.115 21.76

---- Linear regr., Force(0,0) ---- Coefficient = 0.9963

Response Ratio = 0.00000 + 0.11160 \*A

-----  
(#) = Out of Range

8260-J.M

Wed May 21 10:46:40 2008

5.7

5

## Instrument Performance Check (BFB)

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VJ2472-BFB

Injection Date: 05/23/08

Lab File ID: J038534.D

Injection Time: 09:11

Instrument ID: GCMSJ

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	22485	22.6	Pass
75	30.0 - 60.0% of mass 95	52394	52.6	Pass
95	Base peak, 100% relative abundance	99557	100.0	Pass
96	5.0 - 9.0% of mass 95	7509	7.5	Pass
173	Less than 2.0% of mass 174	262	0.26 (0.36) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	73418	73.7	Pass
175	5.0 - 9.0% of mass 174	5230	5.3 (7.1) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	71997	72.3 (98.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	4916	4.9 (6.8) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2472-CC2469	J038536.D	05/23/08	09:59	00:48	Continuing cal 4
VJ2472-BS	J038537.D	05/23/08	10:24	01:13	Blank Spike
VJ2472-MB	J038538.D	05/23/08	10:48	01:37	Method Blank
ZZZZZZ	J038539.D	05/23/08	11:12	02:01	(unrelated sample)
ZZZZZZ	J038545.D	05/23/08	13:39	04:28	(unrelated sample)
ZZZZZZ	J038546.D	05/23/08	14:04	04:53	(unrelated sample)
ZZZZZZ	J038547.D	05/23/08	14:28	05:17	(unrelated sample)
ZZZZZZ	J038548.D	05/23/08	14:53	05:42	(unrelated sample)
ZZZZZZ	J038549.D	05/23/08	15:17	06:06	(unrelated sample)
ZZZZZZ	J038550.D	05/23/08	15:41	06:30	(unrelated sample)
F57465-2	J038551.D	05/23/08	16:06	06:55	(used for QC only; not part of job F57467)
F57465-2MS	J038552.D	05/23/08	16:30	07:19	Matrix Spike
F57465-2MSD	J038553.D	05/23/08	16:54	07:43	Matrix Spike Duplicate
ZZZZZZ	J038554.D	05/23/08	17:19	08:08	(unrelated sample)
ZZZZZZ	J038555.D	05/23/08	17:44	08:33	(unrelated sample)
ZZZZZZ	J038557.D	05/23/08	18:33	09:22	(unrelated sample)
ZZZZZZ	J038558.D	05/23/08	18:57	09:46	(unrelated sample)
ZZZZZZ	J038559.D	05/23/08	19:21	10:10	(unrelated sample)
ZZZZZZ	J038560.D	05/23/08	19:46	10:35	(unrelated sample)
ZZZZZZ	J038561.D	05/23/08	20:10	10:59	(unrelated sample)
ZZZZZZ	J038562.D	05/23/08	20:35	11:24	(unrelated sample)
F57467-1	J038563.D	05/23/08	20:59	11:48	KWSM-FD-01-0508



## Continuing Calibration Summary

Page 1 of 3

Job Number: F57467  
 Account: TETRAPPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VJ2472-CC2469  
 Lab FileID: J038536.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\052308\J038536.D Vial: 1  
 Acq On : 23 May 2008 9:59 am Operator: karenw  
 Sample : CC2469-4 Inst : MSVOA6  
 Misc : ms9891,vj2472,,,,, Multiplr: 1.00  
 MS Integration Params: Tiny.p

Method : C:\MSDCHEM\1\METHODS\8260-J.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Tue May 20 13:05:34 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	91	0.00	7.63
2	Dichlorodifluoromethane	0.197	0.215	-9.1	96	0.00	2.85
3 P	Chloromethane	0.390	0.431	-10.5	102	0.00	3.07
4 C	Vinyl Chloride	0.377	0.430	-14.1	104	0.00	3.20
5	Bromomethane	0.253	0.269	-6.3	100	0.00	3.60
6	Chloroethane	0.227	0.244	-7.5	92	0.00	3.72
7	Trichlorofluoromethane	0.449	0.498	-10.9	94	0.00	3.91
8	Ethyl Ether	0.343	0.395	-15.2	104	0.00	4.15
9	1,2-Dichlorotrifluoroetha	0.412	0.454	-10.2	100	0.00	4.40
10 C	1,1-Dichloroethene	0.460	0.537	-16.7	100	0.00	4.43
----- Amount Calc. %Drift -----							
11	Freon 113	40.000	45.259	-13.1	102	-0.01	4.47
----- AvgRF CCRF %Dev -----							
12	Carbon Disulfide	1.069	1.179	-10.3	100	0.00	4.51
13	Iodomethane	0.543	0.579	-6.6	96	0.00	4.61
----- Amount Calc. %Drift -----							
14	Methylene Chloride	40.000	42.260	-5.6	98	0.01	5.03
15	Acetone	200.000	191.701	4.1	87	0.02	5.08
----- AvgRF CCRF %Dev -----							
16	Methyl acetate	0.046	0.047	-2.2	92	0.00	5.17
17	trans-1,2-Dichloroethene	0.390	0.428	-9.7	93	0.00	5.18
18	Hexane	0.271	0.291	-7.4	91	0.00	5.24
19	Methyl Tert Butyl Ether	0.809	0.840	-3.8	92	0.00	5.31
20	Di-isopropyl ether	1.001	1.107	-10.6	97	0.00	5.65
21 P	1,1-Dichloroethane	0.478	0.527	-10.3	95	0.00	5.82
22	Acrylonitrile	0.085	0.086	-1.2	92	0.00	5.88
23	ETBE	0.910	0.984	-8.1	95	0.00	6.04
24	Vinyl acetate	0.134	0.160	-19.4	101	0.01	6.04
25	cis-1,2-Dichloroethene	0.276	0.299	-8.3	94	0.00	6.37
26	2,2-Dichloropropane	0.377	0.419	-11.1	94	0.00	6.51
27	Bromochloromethane	0.166	0.174	-4.8	93	0.00	6.58
28	Cyclohexane	0.481	0.547	-13.7	96	0.00	6.62
29 C	Chloroform	0.484	0.518	-7.0	95	0.00	6.63
----- Amount Calc. %Drift -----							
30	Tetrahydrofuran	40.000	42.142	-5.4	95	0.01	6.82
----- AvgRF CCRF %Dev -----							

## Continuing Calibration Summary

Page 2 of 3

Job Number: F57467

Sample: VJ2472-CC2469

Account: TETRPAPT Tetra Tech NUS

Lab FileID: J038536.D

Project: NAS Key West, Key West, FL

31	S	Dibromofluoromethane	0.264	0.259	1.9	91	0.00	6.82
32		Carbon Tetrachloride	0.326	0.345	-5.8	91	0.00	6.80
33		1,1,1-Trichloroethane	0.382	0.413	-8.1	93	0.00	6.88
34		2-Butanone	0.144	0.148	-2.8	89	0.01	6.94
35		1,1-Dichloropropene	0.368	0.409	-11.1	94	0.00	6.98
36		Benzene	1.045	1.122	-7.4	93	0.00	7.24
37		TAME	0.710	0.744	-4.8	95	0.00	7.32
38	S	1,2-Dichloroethane-d4	0.327	0.336	-2.8	91	0.00	7.36
39		1,2-Dichloroethane	0.385	0.412	-7.0	95	0.00	7.43
40		Trichloroethene	0.273	0.291	-6.6	92	0.00	7.80
41		Methylcyclohexane	0.418	0.470	-12.4	95	0.00	7.81
42		Dibromomethane	0.169	0.180	-6.5	94	0.00	8.22
43	C	1,2-Dichloropropane	0.292	0.324	-11.0	97	0.00	8.31
44		Bromodichloromethane	0.372	0.400	-7.5	95	0.00	8.35
45		2-Chloroethyl vinyl ether	0.176	0.170	3.4	82	0.00	8.87
46		cis-1,3-Dichloropropene	0.451	0.496	-10.0	96	0.00	8.96
47	I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00	10.69
48	S	Toluene-d8	1.342	1.313	2.2	93	0.00	9.15
49	C	Toluene	1.426	1.496	-4.9	95	0.00	9.21
50		2-Nitropropane	0.086	0.100	-16.3	99	0.00	9.43
51		4-Methyl-2-pentanone	0.376	0.389	-3.5	96	0.00	9.54
52		trans-1,3-Dichloropropene	0.536	0.559	-4.3	94	0.00	9.59
53		Tetrachloroethene	0.334	0.332	0.6	90	0.00	9.60
54		1,1,2-Trichloroethane	0.285	0.289	-1.4	96	0.00	9.76
55		Dibromochloromethane	0.356	0.366	-2.8	93	0.00	9.94
56		1,3-Dichloropropane	0.573	0.595	-3.8	95	0.00	10.04
57		1,2-Dibromoethane	0.320	0.331	-3.4	94	0.00	10.21
58		2-hexanone	0.263	0.262	0.4	92	0.00	10.36
59		1-Chlorohexane	0.448	0.492	-9.8	95	0.00	10.65
60	C	Ethylbenzene	1.630	1.719	-5.5	97	0.00	10.72
61	P	Chlorobenzene	0.978	1.009	-3.2	95	0.00	10.71
62		1,1,1,2-Tetrachloroethane	0.326	0.338	-3.7	94	0.00	10.76
63		m,p-Xylene	1.195	1.302	-9.0	97	0.00	10.85
64		o-Xylene	1.213	1.298	-7.0	95	0.00	11.29
65		Styrene	0.939	0.988	-5.2	93	0.00	11.34
66	P	Bromoform	0.227	0.234	-3.1	92	0.00	11.39
67		Isopropylbenzene	1.277	1.403	-9.9	95	0.00	11.60
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00	13.05
69	S	4-Bromofluorobenzene	0.935	0.938	-0.3	96	0.00	11.90
70		n-Propylbenzene	3.628	3.926	-8.2	96	0.00	12.02
71		Bromobenzene	0.790	0.793	-0.4	94	0.00	12.02
72	P	1,1,2,2-Tetrachloroethane	0.844	0.841	0.4	96	0.00	12.07
73		1,3,5-Trimethylbenzene	2.454	2.639	-7.5	95	0.00	12.21
74		2-Chlorotoluene	2.468	2.610	-5.8	97	0.00	12.20
75		trans-1,4-Dichloro-2-Bute	0.199	0.206	-3.5	90	0.00	12.26
76		1,2,3-Trichloropropane	0.236	0.233	1.3	96	0.00	12.24
77		Cyclohexanone	200.000	203.699	-1.8	98	0.00	12.32
78		4-Chlorotoluene	2.128	2.236	-5.1	95	0.00	12.37
79		tert-Butylbenzene	1.364	1.458	-6.9	94	0.00	12.54
80		1,2,4-Trimethylbenzene	2.416	2.605	-7.8	95	0.00	12.61
81		sec-Butylbenzene	3.028	3.259	-7.6	94	0.00	12.73
82		4-Isopropyltoluene	2.397	2.588	-8.0	93	0.00	12.86
83		1,3-Dichlorobenzene	1.360	1.376	-1.2	92	0.00	12.98
84		1,4-Dichlorobenzene	1.455	1.436	1.3	92	0.00	13.07

# Continuing Calibration Summary

Page 3 of 3

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample:

VJ2472-CC2469

Lab FileID:

J038536.D

85	n-Butylbenzene	1.521	1.641	-7.9	94	0.00	13.30
86	Benzyl Chloride	0.318	0.339	-6.6	88	0.00	13.31
87	1,2-Dichlorobenzene	1.331	1.320	0.8	92	0.00	13.50
<hr/>							
	----- Amount	Calc.	%Drift	-----			
88	1,2-Dibromo-3-Chloropropa	40.000	39.860	0.4	92	0.00	14.25
<hr/>							
	----- AvgRF	CCRF	%Dev	-----			
89	Hexachlorobutadiene	0.394	0.383	2.8	90	0.00	14.80
<hr/>							
	----- Amount	Calc.	%Drift	-----			
90	1,2,4-Trichlorobenzene	40.000	38.298	4.3	89	0.00	14.85
91	Naphthalene	40.000	38.640	3.4	90	0.00	15.13
92	1,2,3-Trichlorobenzene	40.000	38.133	4.7	89	0.00	15.29
<hr/>							
	----- AvgRF	CCRF	%Dev	-----			
93 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	92	0.05	5.36
<hr/>							
	----- Amount	Calc.	%Drift	-----			
94	acrolein	200.000	194.354	2.8	92	-0.01	4.75
<hr/>							
	----- AvgRF	CCRF	%Dev	-----			
95	Tert Butyl Alcohol	1.114	1.057	5.1	94	0.04	5.43
96	tert Amyl alcohol	0.873	0.886	-1.5	96	0.02	7.51
<hr/>							
	----- Amount	Calc.	%Drift	-----			
97	1,4-Dioxane	800.000	731.193	8.6	97	0.04	8.61

(#) = Out of Range  
J038438.D 8260-J.M

SPCC's out = 0 CCC's out = 0  
Tue May 27 11:31:14 2008

5.7

5

## Instrument Performance Check (BFB)

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1133-BFB

Injection Date: 05/23/08

Lab File ID: M0027487.D

Injection Time: 09:26

Instrument ID: GCMSM

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	23053	23.9	Pass
75	30.0 - 60.0% of mass 95	41040	42.6	Pass
95	Base peak, 100% relative abundance	96320	100.0	Pass
96	5.0 - 9.0% of mass 95	5982	6.2	Pass
173	Less than 2.0% of mass 174	450	0.47 (0.48) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	93448	97.0	Pass
175	5.0 - 9.0% of mass 174	6622	6.9 (7.1) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	90104	93.5 (96.4) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	6021	6.3 (6.7) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VM1133-IC1133	M0027488.D	05/23/08	09:51	00:25	Initial cal 1
VM1133-IC1133	M0027489.D	05/23/08	10:18	00:52	Initial cal 2
VM1133-IC1133	M0027490.D	05/23/08	10:44	01:18	Initial cal 3
VM1133-ICC1133	M0027491.D	05/23/08	11:11	01:45	Initial cal 4
VM1133-IC1133	M0027492.D	05/23/08	11:38	02:12	Initial cal 5
VM1133-IC1133	M0027493.D	05/23/08	12:04	02:38	Initial cal 6
VM1133-ICV1133	M0027494.D	05/23/08	12:41	03:15	Initial cal verification 4

## Initial Calibration Summary

Page 1 of 5

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VM1133-ICC1133  
 Lab FileID: M0027491.D

## Response Factor Report MSVOA7

Method : C:\MSDCHEM\1\METHODS\8260MNEW.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Sat May 24 08:57:21 2008  
 Response via : Initial Calibration

## Calibration Files

1 =M0027488.D 2 =M0027489.D 3 =M0027490.D 4 =M0027491.D  
 5 =M0027492.D 6 =M0027493.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----							
2) Dichlorodifluoromet	0.071	0.091	0.126	0.147	0.154	0.146	0.123	27.55
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9978							
Response Ratio	= 0.00000 + 0.14781 *A + -0.00012 *A^2							
3) P Chloromethane	0.519	0.460	0.600	0.598	0.566	0.540	0.547	9.73
4) C Vinyl Chloride	0.306	0.310	0.464	0.482	0.462	0.452	0.412	19.77
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9996							
Response Ratio	= 0.00000 + 0.48470 *A + -0.01621 *A^2							
5) Bromomethane	0.427	0.286	0.377	0.288	0.216	0.156	0.292	34.29
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9949							
Response Ratio	= 0.00000 + 0.38129 *A + -0.11384 *A^2							
6) Chloroethane	0.245	0.242	0.340	0.287	0.231	0.167	0.252	23.04
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9989							
Response Ratio	= 0.00000 + 0.37193 *A + -0.10229 *A^2							
7) Trichlorofluorometh	0.253	0.294	0.414	0.466	0.455	0.396	0.380	22.92
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9969							
Response Ratio	= 0.00000 + 0.50958 *A + -0.05349 *A^2							
8) Ethyl Ether	0.486	0.488	0.531	0.537	0.497	0.433	0.495	7.60
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9993							
Response Ratio	= 0.00000 + 0.60407 *A + -0.08402 *A^2							
9) 1,2-Dichlorotrifluo	0.378	0.372	0.488	0.445	0.420	0.395	0.416	10.68
10) C 1,1-Dichloroethene	0.404	0.422	0.608	0.559	0.513	0.480	0.498	15.86
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9994							
Response Ratio	= 0.00000 + 0.60749 *A + -0.06433 *A^2							
11) Freon 113	0.211	0.226	0.332	0.311	0.305	0.295	0.280	17.67
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9996							
Response Ratio	= 0.00000 + 0.32607 *A + -0.01562 *A^2							
12) Carbon Disulfide	0.902	0.973	1.373	1.264	1.210	1.148	1.145	15.58
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9996							
Response Ratio	= 0.00000 + 1.35722 *A + -0.10488 *A^2							
13) Iodomethane	0.513	0.559	0.716	0.680	0.665	0.659	0.632	12.43
14) Methylene Chloride	0.723	0.526	0.569	0.531	0.526	0.507	0.564	14.33
---- Quadratic regr., Force(0,0)	---- Coefficient = 0.9998							
Response Ratio	= 0.00000 + 0.56180 *A + -0.02740 *A^2							
15) Acetone	0.043	0.041	0.044	0.046	0.049	0.044	0.045	6.42
16) Methyl acetate	0.048	0.050	0.053	0.058	0.055	0.056	0.053	7.08

# Initial Calibration Summary

Job Number: F57467  
Account: TETRAPPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: VM1133-ICC1133  
Lab FileID: M0027491.D

Page 2 of 5

17)	trans-1,2-Dichloroe	0.272	0.329	0.432	0.405	0.400	0.429	0.378	16.90
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9988							
	Response Ratio = 0.00000 + 0.38075 *A + 0.02239 *A^2								
18)	Hexane	0.019	0.028	0.058	0.056	0.059	0.065	0.048	40.42
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9947							
	Response Ratio = 0.00000 + 0.06240 *A								
19)	Methyl Tert Butyl E	0.642	0.669	0.733	0.731	0.749	0.769	0.715	6.86
20)	Di-isopropyl ether	1.198	1.240	1.470	1.403	1.372	1.380	1.344	7.69
21) P	1,1-Dichloroethane	0.400	0.405	0.523	0.490	0.476	0.502	0.466	11.05
22)	Acrylonitrile	0.153	0.161	0.168	0.166	0.167	0.163	0.163	3.45
23)	ETBE	0.855	0.923	1.070	1.040	1.047	1.099	1.006	9.46
24)	Vinyl acetate	0.770	0.847	0.923	0.880	0.835	0.850	0.851	5.95
25)	cis-1,2-Dichloroeth	0.222	0.230	0.299	0.287	0.282	0.297	0.269	12.77
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9992							
	Response Ratio = 0.00000 + 0.27384 *A + 0.01054 *A^2								
26)	2,2-Dichloropropane	0.212	0.222	0.297	0.277	0.270	0.289	0.261	13.63
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9986							
	Response Ratio = 0.00000 + 0.26251 *A + 0.01175 *A^2								
27)	Bromochloromethane	0.142	0.155	0.186	0.178	0.180	0.192	0.172	11.23
28)	Cyclohexane	0.376	0.401	0.601	0.550	0.548	0.588	0.511	19.05
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9985							
	Response Ratio = 0.00000 + 0.51984 *A + 0.03179 *A^2								
29) C	Chloroform	0.339	0.379	0.456	0.439	0.435	0.463	0.418	11.73
30)	Tetrahydrofuran	0.163	0.151	0.157	0.152	0.150	0.146	0.153	4.07
31) S	Dibromofluoromethan	0.238	0.240	0.239	0.240	0.242	0.247	0.241	1.36
32)	Carbon Tetrachlorid	0.184	0.224	0.322	0.298	0.300	0.333	0.277	21.44
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9982							
	Response Ratio = 0.00000 + 0.26951 *A + 0.03005 *A^2								
33)	1,1,1-Trichloroetha	0.203	0.234	0.338	0.312	0.310	0.336	0.289	19.53
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9983							
	Response Ratio = 0.00000 + 0.28987 *A + 0.02171 *A^2								
34)	2-Butanone	0.214	0.220	0.237	0.234	0.237	0.224	0.228	4.35
35)	1,1-Dichloropropene	0.230	0.222	0.334	0.302	0.303	0.330	0.287	17.06
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9982							
	Response Ratio = 0.00000 + 0.28026 *A + 0.02348 *A^2								
36)	Benzene	0.794	0.892	1.156	1.091	1.068	1.122	1.020	14.12
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9991							
	Response Ratio = 0.00000 + 1.05020 *A + 0.03203 *A^2								
37)	TAME	0.556	0.609	0.711	0.703	0.706	0.724	0.668	10.32
38) S	1,2-Dichloroethane-	0.257	0.259	0.262	0.268	0.274	0.255	0.262	2.69
39)	1,2-Dichloroethane	0.309	0.310	0.349	0.334	0.330	0.335	0.328	4.77
40)	Trichloroethene	0.239	0.205	0.285	0.272	0.279	0.309	0.265	14.02
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9988							
	Response Ratio = 0.00000 + 0.24208 *A + 0.03230 *A^2								
41)	Methylcyclohexane	0.258	0.265	0.410	0.391	0.400	0.438	0.360	21.65
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9989							
	Response Ratio = 0.00000 + 0.35369 *A + 0.04057 *A^2								
42)	Dibromomethane	0.117	0.148	0.172	0.171	0.173	0.175	0.159	14.43
43) C	1,2-Dichloropropane	0.284	0.289	0.354	0.344	0.336	0.342	0.325	9.39

5.7  
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## Initial Calibration Summary

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Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: VM1133-ICC1133  
Lab FileID: M0027491.D

44)	Bromodichloromethan	0.273	0.299	0.359	0.350	0.349	0.359	0.332	11.01
45)	2-Chloroethyl vinyl	0.178	0.223	0.268	0.271	0.280	0.289	0.252	16.87
	---- Quadratic regr., Force(0,0) ----	Coefficient = 1.0000							
	Response Ratio = 0.00000 + 0.25829 *A + 0.00310 *A^2								
46)	cis-1,3-Dichloropro	0.345	0.364	0.452	0.442	0.438	0.449	0.415	11.47
47) I	Chlorobenzene-d5	-----ISTD-----							
48) S	Toluene-d8	1.236	1.242	1.176	1.141	1.127	1.107	1.172	4.88
49) C	Toluene	1.046	1.062	1.340	1.265	1.244	1.309	1.211	10.43
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9991							
	Response Ratio = 0.00000 + 1.21505 *A + 0.04261 *A^2								
50)	2-Nitropropane	0.094	0.098	0.104	0.104	0.104	0.103	0.101	4.18
51)	4-Methyl-2-pentanone	0.477	0.514	0.543	0.524	0.519	0.525	0.517	4.23
52)	trans-1,3-Dichlorop	0.332	0.370	0.428	0.421	0.428	0.445	0.404	10.75
53)	Tetrachloroethene	0.235	0.252	0.346	0.333	0.343	0.379	0.315	18.19
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9990							
	Response Ratio = 0.00000 + 0.29701 *A + 0.03953 *A^2								
54)	1,1,2-Trichloroetha	0.250	0.258	0.274	0.272	0.266	0.272	0.265	3.58
55)	Dibromochloromethan	0.246	0.265	0.318	0.322	0.326	0.337	0.302	12.32
56)	1,3-Dichloropropane	0.491	0.512	0.553	0.538	0.533	0.540	0.528	4.24
57)	1,2-Dibromoethane	0.267	0.276	0.313	0.313	0.316	0.322	0.301	7.72
58)	2-hexanone	0.313	0.354	0.388	0.385	0.388	0.381	0.368	8.13
59)	1-Chlorohexane	0.274	0.281	0.424	0.406	0.411	0.448	0.374	20.35
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9989							
	Response Ratio = 0.00000 + 0.36966 *A + 0.03779 *A^2								
60) C	Ethylbenzene	1.238	1.209	1.614	1.521	1.524	1.621	1.455	12.67
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9992							
	Response Ratio = 0.00000 + 1.43951 *A + 0.08568 *A^2								
61) P	Chlorobenzene	0.728	0.757	0.970	0.943	0.945	0.995	0.890	13.01
62)	1,1,1,2-Tetrachloro	0.225	0.236	0.294	0.293	0.295	0.314	0.276	13.14
63)	m,p-Xylene	0.751	0.833	1.184	1.157	1.162	1.217	1.051	19.34
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9995							
	Response Ratio = 0.00000 + 1.09978 *A + 0.02828 *A^2								
64)	o-Xylene	0.763	0.871	1.166	1.130	1.116	1.166	1.035	16.78
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9994							
	Response Ratio = 0.00000 + 1.08271 *A + 0.03892 *A^2								
65)	Styrene	0.596	0.715	0.955	0.957	0.960	1.015	0.866	19.50
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9996							
	Response Ratio = 0.00000 + 0.89376 *A + 0.05855 *A^2								
66) P	Bromoform	0.170	0.190	0.231	0.240	0.249	0.259	0.223	15.73
	---- Quadratic regr., Force(0,0) ----	Coefficient = 1.0000							
	Response Ratio = 0.00000 + 0.22516 *A + 0.01704 *A^2								
67)	Isopropylbenzene	0.765	0.861	1.239	1.187	1.189	1.256	1.083	19.68
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9993							
	Response Ratio = 0.00000 + 1.12422 *A + 0.06288 *A^2								
68) I	1,4-Dichlorobenzene-d	-----ISTD-----							
69) S	4-Bromofluorobenzen	0.825	0.792	0.790	0.782	0.771	0.760	0.786	2.82
70)	n-Propylbenzene	2.151	2.278	3.230	3.175	3.177	3.413	2.904	18.69
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9992							

## Initial Calibration Summary

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Response Ratio = 0.00000 + 2.92517 \*A + 0.23370 \*A^2

71)	Bromobenzene	0.590	0.632	0.725	0.746	0.750	0.797	0.707	11.12
72) P	1,1,2,2-Tetrachloro	0.647	0.720	0.750	0.723	0.687	0.679	0.701	5.23
73)	1,3,5-Trimethylbenz	1.318	1.541	2.176	2.218	2.274	2.378	1.984	22.22
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9998
	Response Ratio =	0.00000		2.07881	*A			0.14812	*A^2
74)	2-Chlorotoluene	1.459	1.593	2.147	2.140	2.168	2.258	1.961	17.46
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9998
	Response Ratio =	0.00000		2.03416	*A			0.10969	*A^2
75)	trans-1,4-Dichloro-	0.223	0.234	0.249	0.254	0.250	0.250	0.243	4.95
76)	1,2,3-Trichloroprop	0.154	0.187	0.204	0.207	0.204	0.209	0.194	10.82
77)	Cyclohexanone	0.025	0.024	0.025	0.025	0.025	0.025	0.025	2.42
78)	4-Chlorotoluene	1.328	1.451	1.870	1.847	1.828	1.951	1.712	15.00
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9993
	Response Ratio =	0.00000		1.71833	*A			0.11049	*A^2
79)	tert-Butylbenzene	0.733	0.816	1.150	1.112	1.116	1.204	1.022	19.19
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9991
	Response Ratio =	0.00000		1.02374	*A			0.08633	*A^2
80)	1,2,4-Trimethylbenz	1.454	1.705	2.199	2.161	2.182	2.337	2.006	17.22
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9994
	Response Ratio =	0.00000		1.99807	*A			0.16336	*A^2
81)	sec-Butylbenzene	1.586	1.849	2.745	2.687	2.703	2.879	2.408	22.65
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9993
	Response Ratio =	0.00000		2.50082	*A			0.18193	*A^2
82)	4-Isopropyltoluene	1.251	1.466	2.188	2.169	2.223	2.373	1.945	23.90
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9996
	Response Ratio =	0.00000		1.99923	*A			0.18250	*A^2
83)	1,3-Dichlorobenzene	1.074	1.080	1.373	1.337	1.358	1.424	1.274	12.21
84)	1,4-Dichlorobenzene	1.196	1.182	1.426	1.418	1.412	1.471	1.351	9.41
85)	n-Butylbenzene	0.719	0.856	1.287	1.286	1.322	1.428	1.150	25.09
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9995
	Response Ratio =	0.00000		1.16345	*A			0.12930	*A^2
86)	Benzyl Chloride	0.195	0.252	0.288	0.298	0.306	0.317	0.276	16.42
	---- Quadratic regr., Force(0,0) ----							Coefficient =	1.0000
	Response Ratio =	0.00000		0.28212	*A			0.01735	*A^2
87)	1,2-Dichlorobenzene	1.064	1.079	1.351	1.329	1.330	1.383	1.256	11.49
88)	1,2-Dibromo-3-Chlor	0.080	0.087	0.104	0.109	0.107	0.108	0.099	12.51
89)	Hexachlorobutadiene	0.272	0.267	0.401	0.401	0.406	0.433	0.363	20.27
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9995
	Response Ratio =	0.00000		0.36958	*A			0.03075	*A^2
90)	1,2,4-Trichlorobenz	0.549	0.639	0.863	0.891	0.905	0.947	0.799	20.49
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9998
	Response Ratio =	0.00000		0.83254	*A			0.05655	*A^2
91)	Naphthalene	1.169	1.574	1.960	2.117	2.167	2.223	1.868	22.21
	---- Quadratic regr., Force(0,0) ----							Coefficient =	0.9998
	Response Ratio =	0.00000		1.99928	*A			0.11388	*A^2
92)	1,2,3-Trichlorobenz	0.531	0.611	0.785	0.805	0.816	0.848	0.733	17.61



# Initial Calibration Summary

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Project: NAS Key West, Key West, FL

Sample: VM1133-ICC1133  
Lab FileID: M0027491.D

---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999  
Response Ratio = 0.00000 + 0.76120 \*A + 0.04261 \*A^2

93) I Tert Butyl Alcohol-d1 -----ISTD-----  
94) acrolein 1.723 1.004 0.906 0.869 0.807 0.697 1.001 36.78  
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9993  
Response Ratio = 0.00000 + 1.00322 \*A + -0.15119 \*A^2

95) Tert Butyl Alcohol 1.388 1.253 1.242 1.215 1.187 1.204 1.248 5.84  
96) tert Amyl alcohol 1.028 1.114 1.115 1.152 1.145 1.164 1.120 4.38  
97) 1,4-Dioxane 0.065 0.119 0.128 0.123 0.117 0.121 0.112 20.82  
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9990  
Response Ratio = 0.00000 + 0.12041 \*A + -0.00006 \*A^2

(#) = Out of Range

8260MNEW.M

Tue May 27 11:05:23 2008

5.7

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## Instrument Performance Check (BFB)

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1133-BFB

Injection Date: 05/23/08

Lab File ID: M0027495.D

Injection Time: 13:11

Instrument ID: GCMSM

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	28501	22.6	Pass
75	30.0 - 60.0% of mass 95	53496	42.5	Pass
95	Base peak, 100% relative abundance	125869	100.0	Pass
96	5.0 - 9.0% of mass 95	8423	6.7	Pass
173	Less than 2.0% of mass 174	296	0.24 (0.25) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	118976	94.5	Pass
175	5.0 - 9.0% of mass 174	8759	7.0 (7.4) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	118976	94.5 (100.0) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	8090	6.4 (6.8) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VM1133-CC1133	M0027496.D	05/23/08	13:36	00:25	Continuing cal 4
VM1133-BS	M0027497.D	05/23/08	14:10	00:59	Blank Spike
VM1133-MB	M0027498.D	05/23/08	14:36	01:25	Method Blank
ZZZZZZ	M0027499.D	05/23/08	15:03	01:52	(unrelated sample)
F57606-1	M0027500.D	05/23/08	15:29	02:18	(used for QC only; not part of job F57467)
ZZZZZZ	M0027501.D	05/23/08	15:56	02:45	(unrelated sample)
ZZZZZZ	M0027502.D	05/23/08	16:22	03:11	(unrelated sample)
F57606-1MS	M0027503.D	05/23/08	16:49	03:38	Matrix Spike
F57606-1MSD	M0027504.D	05/23/08	17:15	04:04	Matrix Spike Duplicate
ZZZZZZ	M0027505.D	05/23/08	17:42	04:31	(unrelated sample)
ZZZZZZ	M0027506.D	05/23/08	18:08	04:57	(unrelated sample)
ZZZZZZ	M0027507.D	05/23/08	18:35	05:24	(unrelated sample)
ZZZZZZ	M0027508.D	05/23/08	19:01	05:50	(unrelated sample)
ZZZZZZ	M0027509.D	05/23/08	19:27	06:16	(unrelated sample)
ZZZZZZ	M0027510.D	05/23/08	19:54	06:43	(unrelated sample)
ZZZZZZ	M0027511.D	05/23/08	20:20	07:09	(unrelated sample)
ZZZZZZ	M0027512.D	05/23/08	20:47	07:36	(unrelated sample)
ZZZZZZ	M0027513.D	05/23/08	21:13	08:02	(unrelated sample)
ZZZZZZ	M0027514.D	05/23/08	21:40	08:29	(unrelated sample)
ZZZZZZ	M0027515.D	05/23/08	22:07	08:56	(unrelated sample)
ZZZZZZ	M0027516.D	05/23/08	22:34	09:23	(unrelated sample)
F57467-4	M0027517.D	05/23/08	23:00	09:49	KWSMMW-06-0508
F57467-5	M0027518.D	05/23/08	23:26	10:15	KWSMMW-07-0508
F57467-6	M0027519.D	05/23/08	23:53	10:42	KWSMMW-08-0508

## Instrument Performance Check (BFB)

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1133-BFB

Injection Date: 05/23/08

Lab File ID: M0027495.D

Injection Time: 13:11

Instrument ID: GCMSM

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F57467-7	M0027520.D	05/24/08	00:20	11:09	KWSMMW-09D-0508

5.4

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## Continuing Calibration Summary

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Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VM1133-CC1133  
 Lab FileID: M0027496.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\052308\M0027496.D Vial: 8  
 Acq On : 23 May 2008 1:36 pm Operator: MelissaM  
 Sample : cc1133-4 Inst : MSVOA7  
 Misc : ms9810,vm1133,,,, Multiplr: 1.00  
 MS Integration Params: Tiny.p

Method : C:\MSDCHEM\1\METHODS\8260MNEW.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Sat May 24 08:57:21 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	126	0.00	7.68
----- Amount Calc. %Drift -----							
2	Dichlorodifluoromethane	40.000	40.132	-0.3	127	0.00	2.81
----- AvgRF CCRF %Dev -----							
3 P	Chloromethane	0.547	0.536	2.0	112	0.01	3.11
----- Amount Calc. %Drift -----							
4 C	Vinyl Chloride	40.000	36.983	7.5	114	0.01	3.21
5	Bromomethane	40.000	28.753	28.1#	99	0.00	3.62
6	Chloroethane	40.000	28.065	29.8#	97	0.00	3.71
7	Trichlorofluoromethane	40.000	34.217	14.5	109	0.02	3.92
----- AvgRF CCRF %Dev -----							
8	Ethyl Ether	0.495	0.450	9.1	105	0.02	4.15
9	1,2-Dichlorotrifluoroetha	0.416	0.425	-2.2	120	0.00	4.39
----- Amount Calc. %Drift -----							
10 C	1,1-Dichloroethene	40.000	37.351	6.6	117	0.00	4.41
11	Freon 113	40.000	41.866	-4.7	132	0.00	4.49
12	Carbon Disulfide	40.000	39.259	1.9	124	0.01	4.48
----- AvgRF CCRF %Dev -----							
13	Iodomethane	0.632	0.696	-10.1	128	0.00	4.60
----- Amount Calc. %Drift -----							
14	Methylene Chloride	40.000	40.330	-0.8	129	0.01	5.05
15	Acetone	200.000	180.314	9.8	118	0.01	5.09
----- AvgRF CCRF %Dev -----							
16	Methyl acetate	0.053	0.050	5.7	109	0.00	5.19
----- Amount Calc. %Drift -----							
17	trans-1,2-Dichloroethene	40.000	42.706	-6.8	132	0.00	5.20
18	Hexane	40.000	44.310	-10.8	156	0.00	5.24
----- AvgRF CCRF %Dev -----							
19	Methyl Tert Butyl Ether	0.715	0.741	-3.6	127	0.02	5.33
20	Di-isopropyl ether	1.344	1.401	-4.2	125	0.00	5.68
21 P	1,1-Dichloroethane	0.466	0.509	-9.2	131	0.01	5.87
22	Acrylonitrile	0.163	0.149	8.6	113	0.00	5.93

## Continuing Calibration Summary

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1133-CC1133  
Lab FileID: M0027496.D

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23	ETBE	1.006	1.049	-4.3	127	0.00	6.07
24	Vinyl acetate	0.851	0.836	1.8	119	0.00	6.08
<hr/>							
		Amount	Calc.	%Drift			
25	cis-1,2-Dichloroethene	40.000	42.156	-5.4	130	0.00	6.42
26	2,2-Dichloropropane	40.000	46.751	-16.9	145	0.00	6.55
<hr/>							
		AvgRF	CCRF	%Dev			
27	Bromochloromethane	0.172	0.185	-7.6	131	0.00	6.63
<hr/>							
		Amount	Calc.	%Drift			
28	Cyclohexane	40.000	43.580	-8.9	136	0.00	6.65
<hr/>							
		AvgRF	CCRF	%Dev			
29 C	Chloroform	0.418	0.456	-9.1	131	0.00	6.68
30	Tetrahydrofuran	0.153	0.133	13.1	110	0.01	6.86
31 S	Dibromofluoromethane	0.241	0.245	-1.7	128	0.00	6.87
<hr/>							
		Amount	Calc.	%Drift			
32	Carbon Tetrachloride	40.000	44.925	-12.3	140	0.00	6.85
33	1,1,1-Trichloroethane	40.000	43.414	-8.5	135	0.00	6.93
<hr/>							
		AvgRF	CCRF	%Dev			
34	2-Butanone	0.228	0.212	7.0	113	0.00	6.99
<hr/>							
		Amount	Calc.	%Drift			
35	1,1-Dichloropropene	40.000	43.806	-9.5	137	0.00	7.03
36	Benzene	40.000	41.979	-4.9	130	0.00	7.28
<hr/>							
		AvgRF	CCRF	%Dev			
37	TAME	0.668	0.698	-4.5	125	0.00	7.36
38 S	1,2-Dichloroethane-d4	0.262	0.266	-1.5	125	0.00	7.42
39	1,2-Dichloroethane	0.328	0.334	-1.8	125	0.00	7.49
<hr/>							
		Amount	Calc.	%Drift			
40	Trichloroethene	40.000	42.390	-6.0	132	0.00	7.84
41	Methylcyclohexane	40.000	44.134	-10.3	138	0.00	7.85
<hr/>							
		AvgRF	CCRF	%Dev			
42	Dibromomethane	0.159	0.168	-5.7	124	0.00	8.28
43 C	1,2-Dichloropropane	0.325	0.340	-4.6	124	0.00	8.37
44	Bromodichloromethane	0.332	0.353	-6.3	127	0.00	8.41
<hr/>							
		Amount	Calc.	%Drift			
45	2-Chloroethyl vinyl ether	200.000	187.915	6.0	118	0.00	8.93
<hr/>							
		AvgRF	CCRF	%Dev			
46	cis-1,3-Dichloropropene	0.415	0.447	-7.7	127	0.00	9.02
47 I	Chlorobenzene-d5	1.000	1.000	0.0	120	0.00	10.75
48 S	Toluene-d8	1.172	1.184	-1.0	124	0.00	9.21
<hr/>							
		Amount	Calc.	%Drift			
49 C	Toluene	40.000	43.438	-8.6	128	0.00	9.26
<hr/>							
		AvgRF	CCRF	%Dev			
50	2-Nitropropane	0.101	0.099	2.0	114	0.00	9.50
51	4-Methyl-2-pentanone	0.517	0.477	7.7	109	0.00	9.61
52	trans-1,3-Dichloropropene	0.404	0.440	-8.9	125	0.00	9.66

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# Continuing Calibration Summary

Page 3 of 4

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: VM1133-CC1133  
Lab FileID: M0027496.D

		Amount	Calc.	%Drift			
53	Tetrachloroethene	40.000	44.346	-10.9	132	0.00	9.64
		AvgRF	CCRF	%Dev			
54	1,1,2-Trichloroethane	0.265	0.271	-2.3	119	0.00	9.82
55	Dibromochloromethane	0.302	0.337	-11.6	125	0.00	10.01
56	1,3-Dichloropropane	0.528	0.544	-3.0	121	0.00	10.10
57	1,2-Dibromoethane	0.301	0.317	-5.3	121	0.00	10.27
58	2-hexanone	0.368	0.353	4.1	109	0.00	10.42
		Amount	Calc.	%Drift			
59	1-Chlorohexane	40.000	45.247	-13.1	135	0.00	10.70
60 C	Ethylbenzene	40.000	42.385	-6.0	126	0.00	10.76
		AvgRF	CCRF	%Dev			
61 P	Chlorobenzene	0.890	0.970	-9.0	123	0.00	10.77
62	1,1,1,2-Tetrachloroethane	0.276	0.310	-12.3	127	0.00	10.82
		Amount	Calc.	%Drift			
63	m,p-Xylene	80.000	84.034	-5.0	124	0.00	10.90
64	o-Xylene	40.000	42.567	-6.4	126	0.00	11.35
65	Styrene	40.000	41.691	-4.2	123	0.00	11.40
66 P	Bromoform	40.000	40.293	-0.7	120	0.00	11.45
67	Isopropylbenzene	40.000	42.684	-6.7	127	0.00	11.65
		AvgRF	CCRF	%Dev			
68 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	117	0.00	13.11
69 S	4-Bromofluorobenzene	0.786	0.808	-2.8	121	0.00	11.96
		Amount	Calc.	%Drift			
70	n-Propylbenzene	40.000	43.314	-8.3	125	0.00	12.07
		AvgRF	CCRF	%Dev			
71	Bromobenzene	0.707	0.776	-9.8	121	0.00	12.08
72 P	1,1,2,2-Tetrachloroethane	0.701	0.688	1.9	111	0.00	12.15
		Amount	Calc.	%Drift			
73	1,3,5-Trimethylbenzene	40.000	42.460	-6.2	123	0.00	12.25
74	2-Chlorotoluene	40.000	42.364	-5.9	123	0.00	12.25
		AvgRF	CCRF	%Dev			
75	trans-1,4-Dichloro-2-Bute	0.243	0.245	-0.8	113	0.00	12.33
76	1,2,3-Trichloropropane	0.194	0.196	-1.0	111	0.00	12.30
77	Cyclohexanone	0.025	0.022	12.0	102	0.00	12.38
		Amount	Calc.	%Drift			
78	4-Chlorotoluene	40.000	43.346	-8.4	124	0.00	12.42
79	tert-Butylbenzene	40.000	43.316	-8.3	125	0.00	12.60
80	1,2,4-Trimethylbenzene	40.000	42.958	-7.4	124	0.00	12.66
81	sec-Butylbenzene	40.000	42.973	-7.4	124	0.00	12.78
82	4-Isopropyltoluene	40.000	43.120	-7.8	125	0.00	12.91
		AvgRF	CCRF	%Dev			
83	1,3-Dichlorobenzene	1.274	1.402	-10.0	122	0.00	13.04
84	1,4-Dichlorobenzene	1.351	1.458	-7.9	120	0.00	13.13
		Amount	Calc.	%Drift			
85	n-Butylbenzene	40.000	42.979	-7.4	124	0.00	13.35
86	Benzyl Chloride	40.000	43.445	-8.6	126	0.00	13.37

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# Continuing Calibration Summary

Page 4 of 4

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1133-CC1133

Lab FileID: M0027496.D

		AvgRF	CCRF	%Dev			
87	1,2-Dichlorobenzene	1.256	1.358	-8.1	119	0.00	13.56
88	1,2-Dibromo-3-Chloropropa	0.099	0.095	4.0	102	0.00	14.30
		Amount	Calc.	%Drift			
89	Hexachlorobutadiene	40.000	43.597	-9.0	126	0.00	14.84
90	1,2,4-Trichlorobenzene	40.000	40.877	-2.2	118	0.00	14.89
91	Naphthalene	40.000	38.026	4.9	109	0.00	15.18
92	1,2,3-Trichlorobenzene	40.000	40.098	-0.2	116	0.00	15.35
		AvgRF	CCRF	%Dev			
93 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	115	0.02	5.33
		Amount	Calc.	%Drift			
94	acrolein	200.000	173.958	13.0	103	0.02	4.78
		AvgRF	CCRF	%Dev			
95	Tert Butyl Alcohol	1.248	1.196	4.2	113	0.00	5.40
96	tert Amyl alcohol	1.120	1.114	0.5	111	0.00	7.53
		Amount	Calc.	%Drift			
97	1,4-Dioxane	800.000	833.005	-4.1	117	0.00	8.60

(#) = Out of Range

M0027491.D 8260MNEW.M

SPCC's out = 0 CCC's out = 0

Tue May 27 11:04:49 2008

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## Instrument Performance Check (BFB)

Page 1 of 2

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VM1134-BFB Injection Date: 05/24/08  
 Lab File ID: M0027522.D Injection Time: 08:16  
 Instrument ID: GCMSM

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	23538	25.2	Pass
75	30.0 - 60.0% of mass 95	41546	44.5	Pass
95	Base peak, 100% relative abundance	93357	100.0	Pass
96	5.0 - 9.0% of mass 95	6098	6.5	Pass
173	Less than 2.0% of mass 174	284	0.3 (0.31) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	92226	98.8	Pass
175	5.0 - 9.0% of mass 174	6564	7.0 (7.1) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	88642	94.9 (96.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	6259	6.7 (7.1) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VM1134-CC1133	M0027523.D	05/24/08	08:42	00:26	Continuing cal 4
VM1134-BS	M0027524.D	05/24/08	09:11	00:55	Blank Spike
VM1134-MB	M0027525.D	05/24/08	09:38	01:22	Method Blank
ZZZZZZ	M0027526.D	05/24/08	10:04	01:48	(unrelated sample)
F57492-1	M0027527.D	05/24/08	10:31	02:15	(used for QC only; not part of job F57467)
ZZZZZZ	M0027528.D	05/24/08	11:00	02:44	(unrelated sample)
ZZZZZZ	M0027529.D	05/24/08	11:27	03:11	(unrelated sample)
F57492-1	M0027530.D	05/24/08	11:53	03:37	(used for QC only; not part of job F57467)
F57492-1MS	M0027531.D	05/24/08	12:19	04:03	Matrix Spike
F57492-1MSD	M0027532.D	05/24/08	12:46	04:30	Matrix Spike Duplicate
F57467-2	M0027533.D	05/24/08	13:13	04:57	KWSMMW-04-0508
F57467-3	M0027534.D	05/24/08	13:39	05:23	KWSMMW-05-0508
ZZZZZZ	M0027535.D	05/24/08	14:06	05:50	(unrelated sample)
ZZZZZZ	M0027536.D	05/24/08	14:32	06:16	(unrelated sample)
ZZZZZZ	M0027537.D	05/24/08	14:58	06:42	(unrelated sample)
ZZZZZZ	M0027538.D	05/24/08	15:25	07:09	(unrelated sample)
ZZZZZZ	M0027539.D	05/24/08	15:52	07:36	(unrelated sample)
ZZZZZZ	M0027540.D	05/24/08	16:19	08:03	(unrelated sample)
ZZZZZZ	M0027541.D	05/24/08	16:45	08:29	(unrelated sample)
ZZZZZZ	M0027542.D	05/24/08	17:12	08:56	(unrelated sample)
ZZZZZZ	M0027543.D	05/24/08	17:38	09:22	(unrelated sample)
ZZZZZZ	M0027544.D	05/24/08	18:05	09:49	(unrelated sample)
ZZZZZZ	M0027545.D	05/24/08	18:32	10:16	(unrelated sample)
ZZZZZZ	M0027546.D	05/24/08	18:58	10:42	(unrelated sample)



## Instrument Performance Check (BFB)

Page 2 of 2

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1134-BFB

Injection Date: 05/24/08

Lab File ID: M0027522.D

Injection Time: 08:16

Instrument ID: GCMSM

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	M0027547.D	05/24/08	19:25	11:09	(unrelated sample)

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## Continuing Calibration Summary

Page 1 of 4

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: VM1134-CC1133  
 Lab FileID: M0027523.D

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\052408\M0027523.D Vial: 1  
 Acq On : 24 May 2008 8:42 am Operator: MelissaM  
 Sample : cc1133-4 Inst : MSVOA7  
 Misc : ms9810,vml134,,,,, Multiplr: 1.00  
 MS Integration Params: Tiny.p

Method : C:\MSDCHEM\1\METHODS\8260MNEW.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Sat May 24 08:57:21 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	98	0.00	7.68
----- Amount Calc. %Drift -----							
2	Dichlorodifluoromethane	40.000	39.688	0.8	98	-0.01	2.81
----- AvgRF CCRF %Dev -----							
3 P	Chloromethane	0.547	0.547	0.0	90	0.00	3.10
----- Amount Calc. %Drift -----							
4 C	Vinyl Chloride	40.000	36.635	8.4	88	0.00	3.20
5	Bromomethane	40.000	53.379	-33.4#	118	0.00	3.62
6	Chloroethane	40.000	46.523	-16.3	110	0.00	3.71
7	Trichlorofluoromethane	40.000	41.739	-4.3	102	0.00	3.91
----- AvgRF CCRF %Dev -----							
8	Ethyl Ether	0.495	0.513	-3.6	93	0.00	4.13
9	1,2-Dichlorotrifluoroetha	0.416	0.461	-10.8	102	0.01	4.39
----- Amount Calc. %Drift -----							
10 C	1,1-Dichloroethene	40.000	42.957	-7.4	104	0.00	4.41
11	Freon 113	40.000	43.650	-9.1	108	0.00	4.49
12	Carbon Disulfide	40.000	41.925	-4.8	103	0.00	4.47
----- AvgRF CCRF %Dev -----							
13	Iodomethane	0.632	0.686	-8.5	99	0.00	4.60
----- Amount Calc. %Drift -----							
14	Methylene Chloride	40.000	41.284	-3.2	103	0.00	5.04
15	Acetone	200.000	145.991	27.0#	75	0.00	5.08
----- AvgRF CCRF %Dev -----							
16	Methyl acetate	0.053	0.047	11.3	80	0.00	5.19
----- Amount Calc. %Drift -----							
17	trans-1,2-Dichloroethene	40.000	42.649	-6.6	103	0.00	5.20
18	Hexane	40.000	39.883	0.3	109	0.00	5.24
----- AvgRF CCRF %Dev -----							
19	Methyl Tert Butyl Ether	0.715	0.694	2.9	93	0.00	5.31
20	Di-isopropyl ether	1.344	1.436	-6.8	100	0.00	5.68
21 P	1,1-Dichloroethane	0.466	0.508	-9.0	102	0.00	5.86
22	Acrylonitrile	0.163	0.151	7.4	89	0.00	5.92

## Continuing Calibration Summary

Page 2 of 4

Job Number: F57467

Account: TETRAPAT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1134-CC1133

Lab FileID: M0027523.D

23	ETBE	1.006	1.064	-5.8	100	0.00	6.07
24	Vinyl acetate	0.851	0.884	-3.9	98	0.00	6.07
<hr/>							
		Amount	Calc.	%Drift			
25	cis-1,2-Dichloroethene	40.000	41.281	-3.2	99	0.00	6.42
26	2,2-Dichloropropane	40.000	46.004	-15.0	111	0.00	6.55
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		AvgRF	CCRF	%Dev			
27	Bromochloromethane	0.172	0.184	-7.0	101	0.00	6.63
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		Amount	Calc.	%Drift			
28	Cyclohexane	40.000	45.541	-13.9	111	0.00	6.65
<hr/>							
		AvgRF	CCRF	%Dev			
29 C	Chloroform	0.418	0.456	-9.1	102	0.00	6.68
30	Tetrahydrofuran	0.153	0.134	12.4	87	0.00	6.85
31 S	Dibromofluoromethane	0.241	0.242	-0.4	99	0.00	6.87
<hr/>							
		Amount	Calc.	%Drift			
32	Carbon Tetrachloride	40.000	44.254	-10.6	108	0.00	6.85
33	1,1,1-Trichloroethane	40.000	43.094	-7.7	104	0.00	6.93
<hr/>							
		AvgRF	CCRF	%Dev			
34	2-Butanone	0.228	0.202	11.4	85	0.00	6.99
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		Amount	Calc.	%Drift			
35	1,1-Dichloropropene	40.000	43.528	-8.8	106	0.00	7.02
36	Benzene	40.000	41.732	-4.3	101	0.00	7.28
<hr/>							
		AvgRF	CCRF	%Dev			
37	TAME	0.668	0.683	-2.2	95	0.00	7.36
38 S	1,2-Dichloroethane-d4	0.262	0.265	-1.1	97	0.00	7.42
39	1,2-Dichloroethane	0.328	0.341	-4.0	100	0.00	7.48
<hr/>							
		Amount	Calc.	%Drift			
40	Trichloroethene	40.000	42.084	-5.2	102	0.00	7.84
41	Methylcyclohexane	40.000	45.855	-14.6	112	0.00	7.84
<hr/>							
		AvgRF	CCRF	%Dev			
42	Dibromomethane	0.159	0.170	-6.9	98	0.00	8.28
43 C	1,2-Dichloropropane	0.325	0.352	-8.3	100	0.00	8.37
44	Bromodichloromethane	0.332	0.357	-7.5	100	0.00	8.41
<hr/>							
		Amount	Calc.	%Drift			
45	2-Chloroethyl vinyl ether	200.000	194.194	2.9	95	0.00	8.93
<hr/>							
		AvgRF	CCRF	%Dev			
46	cis-1,3-Dichloropropene	0.415	0.452	-8.9	100	0.00	9.02
47 I	Chlorobenzene-d5	1.000	1.000	0.0	101	0.00	10.75
48 S	Toluene-d8	1.172	1.137	3.0	101	0.00	9.21
<hr/>							
		Amount	Calc.	%Drift			
49 C	Toluene	40.000	41.926	-4.8	105	0.00	9.26
<hr/>							
		AvgRF	CCRF	%Dev			
50	2-Nitropropane	0.101	0.097	4.0	94	0.00	9.50
51	4-Methyl-2-pentanone	0.517	0.483	6.6	93	0.00	9.61
52	trans-1,3-Dichloropropene	0.404	0.426	-5.4	102	0.00	9.65

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## Continuing Calibration Summary

Page 3 of 4

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: VM1134-CC1133

Lab FileID: M0027523.D

		Amount	Calc.	%Drift			
53	Tetrachloroethene	40.000	43.498	-8.7	109	0.00	9.64
		AvgRF	CCRF	%Dev			
54	1,1,2-Trichloroethane	0.265	0.262	1.1	97	0.00	9.82
55	Dibromochloromethane	0.302	0.311	-3.0	98	0.00	10.01
56	1,3-Dichloropropane	0.528	0.518	1.9	97	0.00	10.10
57	1,2-Dibromoethane	0.301	0.293	2.7	94	0.00	10.27
58	2-hexanone	0.368	0.337	8.4	88	0.00	10.42
		Amount	Calc.	%Drift			
59	1-Chlorohexane	40.000	43.544	-8.9	109	0.00	10.70
60 C	Ethylbenzene	40.000	42.349	-5.9	106	0.00	10.76
		AvgRF	CCRF	%Dev			
61 P	Chlorobenzene	0.890	0.969	-8.9	104	0.00	10.77
62	1,1,1,2-Tetrachloroethane	0.276	0.292	-5.8	101	0.00	10.82
		Amount	Calc.	%Drift			
63	m,p-Xylene	80.000	83.902	-4.9	105	0.00	10.90
64	o-Xylene	40.000	41.307	-3.3	103	0.00	11.35
65	Styrene	40.000	40.977	-2.4	102	0.00	11.40
66 P	Bromoform	40.000	37.865	5.3	95	0.00	11.45
67	Isopropylbenzene	40.000	41.972	-4.9	105	0.00	11.65
		AvgRF	CCRF	%Dev			
68 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	13.11
69 S	4-Bromofluorobenzene	0.786	0.769	2.2	99	0.00	11.96
		Amount	Calc.	%Drift			
70	n-Propylbenzene	40.000	42.448	-6.1	105	0.00	12.07
		AvgRF	CCRF	%Dev			
71	Bromobenzene	0.707	0.758	-7.2	103	0.00	12.08
72 P	1,1,2,2-Tetrachloroethane	0.701	0.703	-0.3	98	0.00	12.15
		Amount	Calc.	%Drift			
73	1,3,5-Trimethylbenzene	40.000	41.444	-3.6	104	0.00	12.25
74	2-Chlorotoluene	40.000	41.218	-3.0	103	0.00	12.25
		AvgRF	CCRF	%Dev			
75	trans-1,4-Dichloro-2-Bute	0.243	0.234	3.7	93	0.00	12.33
76	1,2,3-Trichloropropane	0.194	0.183	5.7	89	0.00	12.30
77	Cyclohexanone	0.025	0.022	12.0	87	0.00	12.38
		Amount	Calc.	%Drift			
78	4-Chlorotoluene	40.000	41.506	-3.8	103	0.00	12.42
79	tert-Butylbenzene	40.000	41.789	-4.5	104	0.00	12.60
80	1,2,4-Trimethylbenzene	40.000	41.861	-4.7	104	0.00	12.66
81	sec-Butylbenzene	40.000	42.040	-5.1	105	0.00	12.78
82	4-Isopropyltoluene	40.000	42.008	-5.0	105	0.00	12.91
		AvgRF	CCRF	%Dev			
83	1,3-Dichlorobenzene	1.274	1.360	-6.8	103	0.00	13.04
84	1,4-Dichlorobenzene	1.351	1.444	-6.9	103	0.00	13.13
		Amount	Calc.	%Drift			
85	n-Butylbenzene	40.000	41.882	-4.7	104	0.00	13.35
86	Benzyl Chloride	40.000	40.970	-2.4	103	0.00	13.37

5.7  
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# Continuing Calibration Summary

Page 4 of 4

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: VM1134-CC1133  
Lab FileID: M0027523.D

		AvgRF	CCRF	%Dev			
87	1,2-Dichlorobenzene	1.256	1.315	-4.7	100	0.00	13.56
88	1,2-Dibromo-3-Chloropropa	0.099	0.095	4.0	87	0.00	14.30
		Amount	Calc.	%Drift			
89	Hexachlorobutadiene	40.000	41.384	-3.5	103	0.00	14.84
90	1,2,4-Trichlorobenzene	40.000	39.437	1.4	98	0.00	14.89
91	Naphthalene	40.000	35.964	10.1	89	0.00	15.18
92	1,2,3-Trichlorobenzene	40.000	38.560	3.6	96	0.00	15.34
		AvgRF	CCRF	%Dev			
93 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	86	0.01	5.32
		Amount	Calc.	%Drift			
94	acrolein	200.000	175.775	12.1	78	0.00	4.77
		AvgRF	CCRF	%Dev			
95	Tert Butyl Alcohol	1.248	1.204	3.5	85	0.00	5.39
96	tert Amyl alcohol	1.120	1.131	-1.0	84	0.00	7.52
		Amount	Calc.	%Drift			
97	1,4-Dioxane	800.000	871.949	-9.0	91	0.00	8.60

(#) = Out of Range  
M0027491.D 8260MNEW.M

SPCC's out = 0 CCC's out = 0  
Tue May 27 14:39:12 2008

5.7  
5

# Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	VJ2472-CC2469	Injection Date:	05/23/08
Lab File ID:	J038536.D	Injection Time:	09:59
Instrument ID:	GCMSJ	Method:	SW846 8260B

	IS 1		IS 2		IS 3		IS 4	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	1412221	7.63	1103337	10.69	569685	13.05	136525	5.36
Upper Limit <sup>a</sup>	2824442	8.13	2206674	11.19	1139370	13.55	273050	5.86
Lower Limit <sup>b</sup>	706111	7.13	551669	10.19	284843	12.55	68263	4.86

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VJ2472-BS	1467671	7.63	1106240	10.69	566141	13.05	131480	5.37
VJ2472-MB	1454670	7.61	1009337	10.69	440134	13.05	128663	5.39
ZZZZZZ	1354953	7.62	962177	10.69	430812	13.05	123964	5.42
ZZZZZZ	1254419	7.63	899339	10.69	386594	13.05	106557	5.39
ZZZZZZ	1304792	7.62	958498	10.69	485717	13.05	130559	5.31
ZZZZZZ	1579173	7.62	1150795	10.69	583662	13.05	162082	5.36
ZZZZZZ	1739580	7.62	1262390	10.69	599136	13.05	160946	5.37
ZZZZZZ	1657649	7.62	1211023	10.69	557233	13.05	150813	5.37
ZZZZZZ	1631098	7.61	1159000	10.69	542367	13.05	139065	5.40
F57465-2	1631962	7.61	1188010	10.69	552327	13.05	117140	5.41
F57465-2MS	1668134	7.61	1252473	10.69	619232	13.05	144897	5.41
F57465-2MSD	1717373	7.61	1266126	10.69	628176	13.05	152626	5.41
ZZZZZZ	1656875	7.62	1171164	10.69	518516	13.05	221590	5.41
ZZZZZZ	1629349	7.61	1321091	10.69	602717	13.05	177045	5.42
ZZZZZZ	1497783	7.62	1076843	10.69	468062	13.05	166561	5.41
ZZZZZZ	1408694	7.62	1008310	10.69	442385	13.05	181891	5.39
ZZZZZZ	1359370	7.62	966597	10.69	451628	13.05	135972	5.36
ZZZZZZ	1330973	7.62	977054	10.69	446395	13.05	131296	5.36
ZZZZZZ	1335346	7.63	992464	10.69	454091	13.05	116953	5.36
ZZZZZZ	1331783	7.63	978934	10.69	444832	13.05	117900	5.34
F57467-1	1295025	7.63	948220	10.69	451009	13.05	180363	5.37

IS 1 = Fluorobenzene  
IS 2 = Chlorobenzene-D5  
IS 3 = 1,4-Dichlorobenzene-d4  
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	VM1133-CC1133	Injection Date:	05/23/08
Lab File ID:	M0027496.D	Injection Time:	13:36
Instrument ID:	GCMSM	Method:	SW846 8260B

	IS 1		IS 2		IS 3		IS 4	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	2234637	7.68	1910234	10.75	982608	13.11	221465	5.33
Upper Limit <sup>a</sup>	4469274	8.18	3820468	11.25	1965216	13.61	442930	5.83
Lower Limit <sup>b</sup>	1117319	7.18	955117	10.25	491304	12.61	110733	4.83

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VM1133-BS	2208339	7.68	1868422	10.75	959062	13.11	237033	5.32
VM1133-MB	2118109	7.68	1742973	10.75	848857	13.11	240183	5.31
ZZZZZZ	1978796	7.68	1638713	10.75	790158	13.11	222617	5.30
F57606-1	1866359	7.68	1542129	10.75	752781	13.11	210160	5.31
ZZZZZZ	1816509	7.68	1564635	10.75	760597	13.11	201512	5.31
ZZZZZZ	1786824	7.68	1574175	10.75	775863	13.11	191426	5.31
F57606-1MS	1825015	7.68	1620485	10.75	839863	13.11	197824	5.31
F57606-1MSD	1861686	7.68	1625236	10.75	845233	13.11	200886	5.30
ZZZZZZ	1825611	7.68	1508695	10.75	740254	13.11	198132	5.30
ZZZZZZ	1761769	7.68	1451481	10.75	717628	13.11	182261	5.31
ZZZZZZ	1714400	7.68	1416952	10.75	694932	13.11	170537	5.31
ZZZZZZ	1641631	7.68	1373762	10.75	670568	13.11	165485	5.31
ZZZZZZ	1598591	7.68	1352092	10.75	660489	13.11	162414	5.31
ZZZZZZ	1558914	7.68	1327584	10.75	649997	13.11	159162	5.31
ZZZZZZ	1516655	7.68	1295049	10.75	635480	13.11	163494	5.32
ZZZZZZ	1482066	7.68	1274120	10.75	626154	13.11	157364	5.31
ZZZZZZ	1524673	7.68	1358776	10.75	688215	13.11	161608	5.31
ZZZZZZ	1551661	7.68	1397155	10.75	704832	13.11	167191	5.31
ZZZZZZ	1569914	7.68	1376174	10.75	694811	13.11	179139	5.31
ZZZZZZ	1563248	7.68	1343944	10.75	668919	13.11	176671	5.30
F57467-4	1526512	7.68	1283228	10.75	636058	13.11	228495	5.31
F57467-5	1501263	7.68	1292395	10.75	639468	13.11	211975	5.31
F57467-6	1489475	7.68	1291357	10.75	674214	13.11	237138	5.31
F57467-7	1522233	7.68	1308493	10.75	677152	13.11	243991	5.30

IS 1 = Fluorobenzene  
IS 2 = Chlorobenzene-D5  
IS 3 = 1,4-Dichlorobenzene-d4  
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	VM1134-CC1133	Injection Date:	05/24/08
Lab File ID:	M0027523.D	Injection Time:	08:42
Instrument ID:	GCMSM	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1743007	7.68	1613808	10.75	848896	13.11	164777	5.32
Upper Limit <sup>a</sup>	3486014	8.18	3227616	11.25	1697792	13.61	329554	5.82
Lower Limit <sup>b</sup>	871504	7.18	806904	10.25	424448	12.61	82389	4.82

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VM1134-BS	1815363	7.68	1592690	10.75	839166	13.11	188459	5.32
VM1134-MB	1797964	7.68	1493442	10.75	724349	13.11	178846	5.31
ZZZZZZ	1632888	7.68	1385443	10.75	690433	13.11	208916	5.31
F57492-1	1614663	7.68	1668481	10.75	699981	13.11	166994	5.31
ZZZZZZ	1674934	7.68	1477308	10.75	764246	13.11	167658	5.31
ZZZZZZ	1779249	7.68	1605056	10.75	754980	13.11	189450	5.31
F57492-1	1776930	7.68	1496400	10.75	705885	13.11	172877	5.31
F57492-1MS	1685171	7.68	1540107	10.75	788758	13.11	177287	5.31
F57492-1MSD	1757425	7.68	1591727	10.75	824741	13.11	186267	5.31
F57467-2	1762368	7.68	1458944	10.75	708666	13.11	283382	5.31
F57467-3	1690070	7.68	1414760	10.75	686638	13.11	275645	5.31
ZZZZZZ	1612461	7.68	1372565	10.75	663061	13.11	174449	5.31
ZZZZZZ	1574380	7.68	1341553	10.75	646953	13.11	161113	5.30
ZZZZZZ	1527770	7.68	1427835	10.75	641325	13.11	155461	5.31
ZZZZZZ	1515611	7.68	1297711	10.75	632634	13.11	148092	5.31
ZZZZZZ	1484788	7.68	1341870	10.75	755110	13.11	149789	5.30
ZZZZZZ	1486885	7.68	1251291	10.75	617482	13.11	154370	5.32
ZZZZZZ	1450777	7.68	1218392	10.75	599560	13.11	143540	5.31
ZZZZZZ	1427623	7.68	1207099	10.75	586798	13.11	134959	5.30
ZZZZZZ	1415762	7.68	1414962	10.75	630903	13.11	157550	5.31
ZZZZZZ	1414215	7.68	1208625	10.75	580172	13.11	133964	5.31
ZZZZZZ	1390653	7.68	1167206	10.75	562876	13.11	123387	5.32
ZZZZZZ	1413006	7.68	1212108	10.75	612272	13.11	129419	5.31
ZZZZZZ	1409773	7.68	1186777	10.75	572415	13.11	120158	5.32

IS 1 = Fluorobenzene  
IS 2 = Chlorobenzene-D5  
IS 3 = 1,4-Dichlorobenzene-d4  
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



# Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Method: SW846 8270C BY SIM

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
F57467-1	R13734.D	54.0	53.0	50.0
F57467-2	R13735.D	60.0	59.0	56.0
F57467-3	R13736.D	64.0	63.0	56.0
F57467-4	R13737.D	60.0	61.0	50.0
F57467-5	R13749.D	61.0	55.0	46.0
F57467-6	W040638.D	56.0	45.0	65.0
F57467-7	W040639.D	56.0	46.0	63.0
OP25062-BS	R13713.D	65.0	65.0	67.0
OP25062-MB	R13714.D	64.0	66.0	69.0
OP25062-MB	R13743.D	65.0	60.0	72.0
OP25062-MS	R13727.D	59.0	60.0	64.0
OP25062-MSD	R13728.D	66.0	65.0	67.0
OP25106-BS	W040625.D	69.0	60.0	69.0
OP25106-MB	W040624.D	62.0	53.0	68.0
OP25106-MB	W040672.D	57.0	60.0	66.0
OP25106-MS	W040629.D	60.0	52.0	63.0
OP25106-MSD	W040630.D	62.0	62.0	65.0

Surrogate  
Compounds

Recovery  
Limits

S1 = Nitrobenzene-d5	42-108%
S2 = 2-Fluorobiphenyl	40-106%
S3 = Terphenyl-d14	39-121%

7.6

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## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25062-MS	R13727.D	1	05/15/08	RB	05/14/08	OP25062	SR636
OP25062-MSD	R13728.D	1	05/15/08	RB	05/14/08	OP25062	SR636
F57465-6	R13726.D	1	05/15/08	RB	05/14/08	OP25062	SR636

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5

CAS No.	Compound	F57465-6 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.96 U	48.1	34.2	71	37.0	77	8	60-94/25
208-96-8	Acenaphthylene	0.96 U	48.1	33.1	69	36.0	75	8	60-92/24
120-12-7	Anthracene	0.96 U	48.1	34.4	72	37.0	77	7	69-98/19
56-55-3	Benzo(a)anthracene	0.19 U	4.81	3.6	75	3.8	79	5	65-102/23
50-32-8	Benzo(a)pyrene	0.19 U	4.81	3.7	77	3.9	81	5	74-106/23
205-99-2	Benzo(b)fluoranthene	0.19 U	4.81	3.5	73	3.7	77	6	71-104/24
191-24-2	Benzo(g,h,i)perylene	0.19 U	4.81	3.8	79	3.9	81	3	60-104/22
207-08-9	Benzo(k)fluoranthene	0.19 U	4.81	3.6	75	3.8	79	5	70-104/22
218-01-9	Chrysene	0.19 U	4.81	3.7	77	3.8	79	3	69-104/21
53-70-3	Dibenzo(a,h)anthracene	0.19 U	4.81	3.8	79	3.9	81	3	63-107/21
206-44-0	Fluoranthene	0.96 U	48.1	36.7	76	38.6	80	5	70-99/23
86-73-7	Fluorene	0.96 U	48.1	35.0	73	37.5	78	7	62-95/25
193-39-5	Indeno(1,2,3-cd)pyrene	0.19 U	4.81	3.7	77	3.8	79	3	63-107/24
90-12-0	1-Methylnaphthalene	0.96 U	48.1	36.3	76	39.6	82	9	57-94/26
91-57-6	2-Methylnaphthalene	0.96 U	48.1	32.8	68	35.7	74	8	58-90/23
91-20-3	Naphthalene	0.96 U	48.1	34.4	72	37.4	78	8	58-92/23
85-01-8	Phenanthrene	0.96 U	48.1	33.9	71	35.7	74	5	68-98/23
129-00-0	Pyrene	0.96 U	48.1	35.9	75	36.5	76	2	66-102/25

CAS No.	Surrogate Recoveries	MS	MSD	F57465-6	Limits
4165-60-0	Nitrobenzene-d5	59%	66%	68%	42-108%
321-60-8	2-Fluorobiphenyl	60%	65%	66%	40-106%
1718-51-0	Terphenyl-d14	64%	67%	47%	39-121%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57467  
 Account: TETRAPPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MS	W040629.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
OP25106-MSD	W040630.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
F57485-3	W040628.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-6, F57467-7

CAS No.	Compound	F57485-3 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.96 U	48.1	29.7	62	30.8	64	4	60-94/25
208-96-8	Acenaphthylene	0.96 U	48.1	30.3	63	31.5	66	4	60-92/24
120-12-7	Anthracene	0.96 U	48.1	32.9	68*	34.3	71	4	69-98/19
56-55-3	Benzo(a)anthracene	0.19 U	4.81	3.5	73	3.6	75	3	65-102/23
50-32-8	Benzo(a)pyrene	0.19 U	4.81	3.8	79	3.8	79	0	74-106/23
205-99-2	Benzo(b)fluoranthene	0.19 U	4.81	3.6	75	3.7	77	3	71-104/24
191-24-2	Benzo(g,h,i)perylene	0.19 U	4.81	3.4	71	3.4	71	0	60-104/22
207-08-9	Benzo(k)fluoranthene	0.19 U	4.81	3.5	73	3.6	75	3	70-104/22
218-01-9	Chrysene	0.19 U	4.81	3.5	73	3.6	75	3	69-104/21
53-70-3	Dibenzo(a,h)anthracene	0.19 U	4.81	3.5	73	3.5	73	0	63-107/21
206-44-0	Fluoranthene	0.96 U	48.1	34.6	72	35.2	73	2	70-99/23
86-73-7	Fluorene	0.96 U	48.1	32.3	67	33.4	69	3	62-95/25
193-39-5	Indeno(1,2,3-cd)pyrene	0.19 U	4.81	3.5	73	3.5	73	0	63-107/24
90-12-0	1-Methylnaphthalene	0.96 U	48.1	29.3	61	30.3	63	3	57-94/26
91-57-6	2-Methylnaphthalene	0.96 U	48.1	27.4	57*	28.1	58	3	58-90/23
91-20-3	Naphthalene	0.96 U	48.1	28.7	60	29.4	61	2	58-92/23
85-01-8	Phenanthrene	0.96 U	48.1	31.4	65*	32.7	68	4	68-98/23
129-00-0	Pyrene	0.96 U	48.1	32.7	68	33.8	70	3	66-102/25

CAS No.	Surrogate Recoveries	MS	MSD	F57485-3	Limits
4165-60-0	Nitrobenzene-d5	60%	62%	71%	42-108%
321-60-8	2-Fluorobiphenyl	52%	62%	61%	40-106%
1718-51-0	Terphenyl-d14	63%	65%	75%	39-121%

**Blank Spike Summary**

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25062-BS	R13713.D	1	05/15/08	RB	05/14/08	OP25062	SR636

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	19.1	76	60-94
208-96-8	Acenaphthylene	25	18.6	74	60-92
120-12-7	Anthracene	25	19.4	78	69-98
56-55-3	Benzo(a)anthracene	2.5	1.9	76	65-102
50-32-8	Benzo(a)pyrene	2.5	2.0	80	74-106
205-99-2	Benzo(b)fluoranthene	2.5	2.0	80	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	2.1	84	60-104
207-08-9	Benzo(k)fluoranthene	2.5	2.0	80	70-104
218-01-9	Chrysene	2.5	2.0	80	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	2.0	80	63-107
206-44-0	Fluoranthene	25	20.6	82	70-99
86-73-7	Fluorene	25	19.7	79	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	1.9	76	63-107
90-12-0	1-Methylnaphthalene	25	20.1	80	57-94
91-57-6	2-Methylnaphthalene	25	18.2	73	58-90
91-20-3	Naphthalene	25	19.3	77	58-92
85-01-8	Phenanthrene	25	19.1	76	68-98
129-00-0	Pyrene	25	19.7	79	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	65%	42-108%
321-60-8	2-Fluorobiphenyl	65%	40-106%
1718-51-0	Terphenyl-d14	67%	39-121%

## Blank Spike Summary

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-BS	W040625.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-6, F57467-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	17.5	70	60-94
208-96-8	Acenaphthylene	25	18.2	73	60-92
120-12-7	Anthracene	25	18.8	75	69-98
56-55-3	Benzo(a)anthracene	2.5	1.9	76	65-102
50-32-8	Benzo(a)pyrene	2.5	2.0	80	74-106
205-99-2	Benzo(b)fluoranthene	2.5	2.0	80	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	1.9	76	60-104
207-08-9	Benzo(k)fluoranthene	2.5	1.9	76	70-104
218-01-9	Chrysene	2.5	1.9	76	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	1.9	76	63-107
206-44-0	Fluoranthene	25	19.2	77	70-99
86-73-7	Fluorene	25	18.9	76	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	1.9	76	63-107
90-12-0	1-Methylnaphthalene	25	17.1	68	57-94
91-57-6	2-Methylnaphthalene	25	16.0	64	58-90
91-20-3	Naphthalene	25	16.8	67	58-92
85-01-8	Phenanthrene	25	18.0	72	68-98
129-00-0	Pyrene	25	18.6	74	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	69%	42-108%
321-60-8	2-Fluorobiphenyl	60%	40-106%
1718-51-0	Terphenyl-d14	69%	39-121%

## Method Blank Summary

Page 1 of 1

Job Number: F57467

Account: TETRAPPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25062-MB	R13714.D	1	05/15/08	RB	05/14/08	OP25062	SR636

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	64% 42-108%
321-60-8	2-Fluorobiphenyl	66% 40-106%
1718-51-0	Terphenyl-d14	69% 39-121%

## Method Blank Summary

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25062-MB	R13743.D	1	05/16/08	RB	05/14/08	OP25062	SR637

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	65% 42-108%
321-60-8	2-Fluorobiphenyl	60% 40-106%
1718-51-0	Terphenyl-d14	72% 39-121%

## Method Blank Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MB	W040624.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	62% 42-108%
321-60-8	2-Fluorobiphenyl	53% 40-106%
1718-51-0	Terphenyl-d14	68% 39-121%



## Method Blank Summary

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Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MB	W040672.D	1	05/21/08	RB	05/19/08	OP25106	SW2082

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	57% 42-108%
321-60-8	2-Fluorobiphenyl	60% 40-106%
1718-51-0	Terphenyl-d14	66% 39-121%

## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SR633-DFTPP Injection Date: 05/12/08  
 Lab File ID: R13677.D Injection Time: 16:06  
 Instrument ID: GCMSR

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	81069	41.5	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	86473	44.2	Pass
70	Less than 2.0% of mass 69	228	0.12 (0.26) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	91866	47.0	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	195458	100.0	Pass
199	5.0 - 9.0% of mass 198	13349	6.8	Pass
275	10.0 - 30.0% of mass 198	55120	28.2	Pass
365	1.0 - 100.0% of mass 198	6503	3.3	Pass
441	Present, but less than mass 443	25922	13.3 (80.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	169421	86.7	Pass
443	17.0 - 23.0% of mass 442	32225	16.5 (19.0) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR633-IC633	R13678.D	05/12/08	16:22	00:16	Initial cal 1
SR633-IC633	R13679.D	05/12/08	16:49	00:43	Initial cal 2
SR633-IC633	R13680.D	05/12/08	17:15	01:09	Initial cal 3
SR633-ICC633	R13681.D	05/12/08	17:42	01:36	Initial cal 4
SR633-IC633	R13682.D	05/12/08	18:08	02:02	Initial cal 5
SR633-IC633	R13683.D	05/12/08	18:35	02:29	Initial cal 6
SR633-IC633	R13684.D	05/12/08	19:01	02:55	Initial cal 7
SR633-ICV633	R13685.D	05/12/08	19:28	03:22	Initial cal verification 4
SR633-ICV633	R13686.D	05/12/08	19:54	03:48	Initial cal verification 4

## Initial Calibration Summary

Page 1 of 2

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SR633-ICC633  
 Lab FileID: R13681.D

## Response Factor Report MSBNA3

Method : C:\msdchem\1\METHODS\SIM\_PAH3.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu May 15 08:54:43 2008  
 Response via : Initial Calibration

## Calibration Files

L1 =R13678.D L2 =R13679.D L3 =R13680.D L4 =R13681.D  
 L5 =R13682.D L6 =R13683.D L7 =R13684.D icv =R13685.D

Compound	L1	L2	L3	L4	L5	L6	L7	icv	Avg %RSD
1) I Naphthalene-d8	-----ISTD-----								
2) Nitrobenzene	0.359	0.371	0.374	0.381	0.384	0.396	0.398	0.381	3.64
3) N-nitroso-di		0.136	0.134	0.137	0.136	0.136	0.131	0.135	1.53
4) Naphthalene	1.219	1.247	1.233	1.220	1.184	1.108	1.081	1.184	5.48
5) 2-Methylnaph	0.772	0.797	0.798	0.796	0.778	0.752	0.748	0.777	2.70
6) 1-Methylnaph	0.701	0.729	0.724	0.728	0.709	0.690	0.694	0.711	2.30
7) I Acenaphthene-d10	-----ISTD-----								
8) Hexachlorocy		0.321	0.365	0.389	0.401	0.400	0.385	0.377	8.03
9) 2-Fluorobiph	1.720	1.781	1.777	1.790	1.749	1.764	1.752	1.762	1.35
10) Acenaphthyle	2.387	2.504	2.441	2.474	2.378	2.323	2.185	2.385	4.50
11) Acenaphthene	1.485	1.531	1.492	1.490	1.423	1.423	1.402	1.464	3.26
12) 2,4-Dinitrop		0.160	0.222	0.244	0.270	0.314	0.323	0.256	23.84
13) 4-Nitropheno		0.296	0.323	0.338	0.346	0.374	0.361	0.340	8.11
14) Fluorene	1.556	1.627	1.592	1.595	1.537	1.549	1.449	1.558	3.69
15) I Phenanthrene-d10	-----ISTD-----								
16) 2,4,6-Tribr	0.097	0.104	0.111	0.117	0.118	0.122	0.125	0.113	8.76
17) Pentachlorop	0.091	0.115	0.142	0.162	0.188	0.187	0.191	0.154	25.58
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9993									
Response Ratio = 0.00000 + 0.17073 *A + 0.00166 *A^2									
18) Phenanthrene	1.440	1.489	1.455	1.443	1.396	1.357	1.352	1.419	3.64
19) Anthracene	1.450	1.500	1.491	1.483	1.404	1.365	1.345	1.434	4.40
20) Fluoranthene	1.433	1.507	1.491	1.483	1.430	1.400	1.384	1.447	3.28
21) I Chrysene-d12	-----ISTD-----								
22) Pyrene	1.995	2.118	2.064	2.084	1.948	1.898	1.885	1.999	4.62
23) Terphenyl-d1	0.978	1.042	1.050	1.085	1.048	1.033	1.033	1.039	3.08
24) Benzo[a]anth	1.548	1.547	1.514	1.568	1.579	1.644	1.652	1.579	3.26
25) Chrysene	1.453	1.516	1.529	1.551	1.552	1.577	1.585	1.537	2.89
26) I Perylene-d12	-----ISTD-----								
27) Benzo[b]fluo	1.131	1.275	1.354	1.470	1.487	1.587	1.590	1.413	12.01
28) Benzo[k]fluo	1.273	1.409	1.512	1.582	1.627	1.680	1.703	1.541	10.07
29) Benzo[a]pyre	0.941	1.062	1.172	1.259	1.316	1.402	1.416	1.224	14.42
30) Indeno[1,2,3	0.671	0.729	0.825	0.881	0.982	1.087	1.099	0.896	18.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9996									
Response Ratio = 0.00000 + 0.89291 *A + 0.17282 *A^2									
31) Dibenz[a,h]a	0.652	0.720	0.820	0.849	0.977	1.064	1.093	0.882	19.14
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9997									
Response Ratio = 0.00000 + 0.86850 *A + 0.18436 *A^2									
32) Benzo[g,h,i]	0.953	1.019	1.095	1.109	1.180	1.248	1.263	1.124	10.21

## Initial Calibration Summary

Page 2 of 2

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: SR633-ICC633  
Lab FileID: R13681.D

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(#) = Out of Range ### Number of calibration levels exceeded format ###

SIM\_PAH3.M

Thu May 15 08:55:25 2008

7.7  
7

**Instrument Performance Check (DFTPP)**

Page 1 of 2

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample:	SR636-DFTPP	Injection Date:	05/15/08
Lab File ID:	R13711.D	Injection Time:	12:00
Instrument ID:	GCMSR		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	73632	41.7	Pass
68	Less than 2.0% of mass 69	314	0.18 (0.4) <sup>a</sup>	Pass
69	Mass 69 relative abundance	77901	44.1	Pass
70	Less than 2.0% of mass 69	395	0.22 (0.51) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	84581	47.9	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	176602	100.0	Pass
199	5.0 - 9.0% of mass 198	11828	6.7	Pass
275	10.0 - 30.0% of mass 198	50717	28.7	Pass
365	1.0 - 100.0% of mass 198	5991	3.4	Pass
441	Present, but less than mass 443	24440	13.8 (81.5) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	157760	89.3	Pass
443	17.0 - 23.0% of mass 442	29977	17.0 (19.0) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR636-CC633	R13712.D	05/15/08	12:17	00:17	Continuing cal 4
OP25062-BS	R13713.D	05/15/08	12:50	00:50	Blank Spike
OP25062-MB	R13714.D	05/15/08	13:17	01:17	Method Blank
ZZZZZZ	R13715.D	05/15/08	13:48	01:48	(unrelated sample)
ZZZZZZ	R13716.D	05/15/08	14:14	02:14	(unrelated sample)
ZZZZZZ	R13718.D	05/15/08	15:14	03:14	(unrelated sample)
ZZZZZZ	R13720.D	05/15/08	16:13	04:13	(unrelated sample)
ZZZZZZ	R13721.D	05/15/08	16:40	04:40	(unrelated sample)
ZZZZZZ	R13722.D	05/15/08	17:06	05:06	(unrelated sample)
ZZZZZZ	R13723.D	05/15/08	17:35	05:35	(unrelated sample)
ZZZZZZ	R13724.D	05/15/08	18:02	06:02	(unrelated sample)
ZZZZZZ	R13725.D	05/15/08	18:28	06:28	(unrelated sample)
F57465-6	R13726.D	05/15/08	18:55	06:55	(used for QC only; not part of job F57467)
OP25062-MS	R13727.D	05/15/08	19:22	07:22	Matrix Spike
OP25062-MSD	R13728.D	05/15/08	19:49	07:49	Matrix Spike Duplicate
ZZZZZZ	R13729.D	05/15/08	20:16	08:16	(unrelated sample)
ZZZZZZ	R13733.D	05/15/08	22:02	10:02	(unrelated sample)
F57467-1	R13734.D	05/15/08	22:29	10:29	KWSM-FD-01-0508
F57467-2	R13735.D	05/15/08	22:55	10:55	KWSMMW-04-0508

# Instrument Performance Check (DFTPP)

Page 2 of 2

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: SR636-DFTPP

Injection Date: 05/15/08

Lab File ID: R13711.D

Injection Time: 12:00

Instrument ID: GCMSR

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F57467-3	R13736.D	05/15/08	23:22	11:22	KWSMMW-05-0508
F57467-4	R13737.D	05/15/08	23:49	11:49	KWSMMW-06-0508

7.4

7

## Continuing Calibration Summary

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SR636-CC633  
 Lab FileID: R13712.D

Page 1 of 1

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\051508a\R13712.D Vial: 2  
 Acq On : 15 May 2008 12:17 pm Operator: rayb  
 Sample : cc633-4 Inst : MSBNA3  
 Misc : op25062,sr636,1000,,,1,1,water Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu May 15 14:05:52 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	57	0.00	5.78
2 S	Nitrobenzene-d5	0.391	0.385	1.5	56	0.00	5.13
3 P	N-nitroso-di-n-propylamin	0.139	0.137	1.4	56	0.00	5.01
4	Naphthalene	1.194	1.268	-6.2	58	0.00	5.80
5	2-Methylnaphthalene	0.791	0.826	-4.4	58	0.00	6.56
6	1-Methylnaphthalene	0.723	0.762	-5.4	58	0.00	6.68
7 I	Acenaphthene-d10	1.000	1.000	0.0	58	0.00	7.98
8 P	Hexachlorocyclopentadiene	0.336	0.331	1.5	56	0.00	6.75
9 S	2-Fluorobiphenyl	1.885	1.915	-1.6	59	0.00	7.04
10	Acenaphthylene	2.456	2.535	-3.2	58	0.00	7.76
11 C	Acenaphthene	1.514	1.543	-1.9	58	0.00	8.03
12 P	2,4-Dinitrophenol	0.230	0.172	25.2#	44#	0.00	8.13
13 P	4-Nitrophenol	0.318	0.283	11.0	53	0.00	8.29
14	Fluorene	1.590	1.639	-3.1	58	0.00	8.85
15 I	Phenanthrene-d10	1.000	1.000	0.0	59	0.00	10.46
16	Phenanthrene	1.466	1.491	-1.7	59	0.00	10.50
17	Anthracene	1.487	1.528	-2.8	59	0.00	10.59
18	Carbazole	1.154	1.169	-1.3	57	0.00	10.94
19 C	Fluoranthene	1.451	1.514	-4.3	60	0.01	12.67
20 I	Chrysene-d12	1.000	1.000	0.0	62	0.00	15.37
21	Pyrene	2.186	2.230	-2.0	60	-0.02	13.07
22 S	Terphenyl-d14	1.111	1.119	-0.7	60	-0.01	13.49
23	Benzo[a]anthracene	1.651	1.551	6.1	59	0.00	15.36
24	Chrysene	1.606	1.619	-0.8	62	0.00	15.42
25 I	Perylene-d12	1.000	1.000	0.0	66	0.00	17.87
26	Benzo[b]fluoranthene	1.587	1.447	8.8	61	0.00	17.26
27	Benzo[k]fluoranthene	1.662	1.654	0.5	64	0.00	17.31
28 C	Benzo[a]pyrene	1.376	1.302	5.4	62	0.00	17.77
29	Indeno[1,2,3-cd]pyrene	1.048	0.968	7.6	60	0.00	19.45
30	Dibenz[a,h]anthracene	1.015	0.998	1.7	63	0.00	19.51
31	Benzo[g,h,i]perylene	1.204	1.248	-3.7	67	0.01	19.81

(#) = Out of Range  
 R13586.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0  
 Thu May 15 14:06:39 2008

## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SR637-DFTPP	Injection Date: 05/16/08
Lab File ID: R13741.D	Injection Time: 13:56
Instrument ID: GCMSR	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	94988	39.0	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	101059	41.5	Pass
70	Less than 2.0% of mass 69	423	0.17 (0.42) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	109608	45.0	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	243381	100.0	Pass
199	5.0 - 9.0% of mass 198	16228	6.7	Pass
275	10.0 - 30.0% of mass 198	69381	28.5	Pass
365	1.0 - 100.0% of mass 198	8454	3.5	Pass
441	Present, but less than mass 443	33637	13.8 (80.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	216594	89.0	Pass
443	17.0 - 23.0% of mass 442	41848	17.2 (19.3) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR637-CC633	R13742.D	05/16/08	14:12	00:16	Continuing cal 5
OP25062-MB	R13743.D	05/16/08	14:43	00:47	Method Blank
ZZZZZZ	R13744.D	05/16/08	15:10	01:14	(unrelated sample)
ZZZZZZ	R13745.D	05/16/08	15:37	01:41	(unrelated sample)
ZZZZZZ	R13746.D	05/16/08	16:09	02:13	(unrelated sample)
ZZZZZZ	R13747.D	05/16/08	16:36	02:40	(unrelated sample)
ZZZZZZ	R13748.D	05/16/08	17:03	03:07	(unrelated sample)
F57467-5	R13749.D	05/16/08	17:30	03:34	KWSMMW-07-0508
OP25084-MB	R13750.D	05/16/08	17:57	04:01	Method Blank
ZZZZZZ	R13751.D	05/16/08	18:24	04:28	(unrelated sample)
ZZZZZZ	R13752.D	05/16/08	18:50	04:54	(unrelated sample)



## Continuing Calibration Summary

Job Number: F57467

Account: TETRAPAT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: SR637-CC633

Lab FileID: R13742.D

Page 1 of 1

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\051608\R13742.D

Vial: 2

Acq On : 16 May 2008 2:12 pm

Operator: rayb

Sample : cc633-5

Inst : MSBNA3

Misc : op25062,sr637,1000,,,1,1,water

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\SIM\_PAHC.M (RTE Integrator)

Title : PAH's by 8270 SIM

Last Update : Mon May 19 12:37:55 2008

Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min

Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	73	0.00	5.76
2 S	Nitrobenzene-d5	0.391	0.400	-2.3	73	0.00	5.12
3 P	N-nitroso-di-n-propylamin	0.139	0.141	-1.4	73	0.00	5.00
4	Naphthalene	1.194	1.274	-6.7	76	0.00	5.78
5	2-Methylnaphthalene	0.791	0.840	-6.2	75	0.00	6.54
6	1-Methylnaphthalene	0.723	0.771	-6.6	76	0.00	6.66
7 I	Acenaphthene-d10	1.000	1.000	0.0	75	0.00	7.96
8 P	Hexachlorocyclopentadiene	0.336	0.347	-3.3	70	0.00	6.73
9 S	2-Fluorobiphenyl	1.885	1.769	6.2	69	0.00	7.01
10	Acenaphthylene	2.456	2.539	-3.4	76	0.00	7.74
11 C	Acenaphthene	1.514	1.557	-2.8	76	0.00	8.01
12 P	2,4-Dinitrophenol	0.230	0.181	21.3#	53	0.00	8.12
13 P	4-Nitrophenol	0.318	0.278	12.6	63	0.01	8.29
14	Fluorene	1.590	1.638	-3.0	76	0.00	8.83
15 I	Phenanthrene-d10	1.000	1.000	0.0	75	0.00	10.43
16	Phenanthrene	1.466	1.514	-3.3	76	0.00	10.48
17	Anthracene	1.487	1.529	-2.8	75	0.00	10.57
18	Carbazole	1.154	1.037	10.1	68	0.01	10.91
19 C	Fluoranthene	1.451	1.521	-4.8	76	0.02	12.65
20 I	Chrysene-d12	1.000	1.000	0.0	71	0.00	15.34
21	Pyrene	2.186	2.364	-8.1	75	-0.01	13.05
22 S	Terphenyl-d14	1.111	1.216	-9.5	75	0.00	13.47
23	Benzo[a]anthracene	1.651	1.648	0.2	70	0.00	15.33
24	Chrysene	1.606	1.667	-3.8	71	0.00	15.39
25 I	Perylene-d12	1.000	1.000	0.0	69	0.00	17.84
26	Benzo[b]fluoranthene	1.587	1.644	-3.6	67	0.00	17.23
27	Benzo[k]fluoranthene	1.662	1.746	-5.1	70	0.00	17.28
28 C	Benzo[a]pyrene	1.376	1.378	-0.1	66	-0.03	17.75
29	Indeno[1,2,3-cd]pyrene	1.048	0.887	15.4	55	-0.02	19.43
30	Dibenz[a,h]anthracene	1.015	0.841	17.1	54	-0.02	19.48
31	Benzo[g,h,i]perylene	1.204	1.174	2.5	64	-0.02	19.77

(#) = Out of Range

R13587.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0

Mon May 19 12:38:48 2008

**Instrument Performance Check (DFTPP)**

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2079-DFTPP	Injection Date: 05/19/08
Lab File ID: W040585.D	Injection Time: 15:42
Instrument ID: GCMSW	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	92220	34.8	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	97517	36.8	Pass
70	Less than 2.0% of mass 69	586	0.22 (0.6) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	127264	48.1	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	264832	100.0	Pass
199	5.0 - 9.0% of mass 198	18662	7.0	Pass
275	10.0 - 30.0% of mass 198	65664	24.8	Pass
365	1.0 - 100.0% of mass 198	6305	2.4	Pass
441	Present, but less than mass 443	26572	10.0 (77.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	176952	66.8	Pass
443	17.0 - 23.0% of mass 442	34312	13.0 (19.4) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2079-IC2079	W040587.D	05/19/08	16:35	00:53	Initial cal 1
SW2079-IC2079	W040588.D	05/19/08	17:02	01:20	Initial cal 2
SW2079-IC2079	W040589.D	05/19/08	17:28	01:46	Initial cal 3
SW2079-ICC2079	W040590.D	05/19/08	17:54	02:12	Initial cal 4
SW2079-IC2079	W040591.D	05/19/08	18:20	02:38	Initial cal 5
SW2079-IC2079	W040592.D	05/19/08	18:47	03:05	Initial cal 6
SW2079-IC2079	W040593.D	05/19/08	19:13	03:31	Initial cal 7
SW2079-ICV2079	W040594.D	05/19/08	19:39	03:57	Initial cal verification 4

## Initial Calibration Summary

Page 1 of 1

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2079-ICC2079  
 Lab FileID: W040590.D

## Response Factor Report MSBNA01

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Tue May 20 10:59:33 2008  
 Response via : Initial Calibration

## Calibration Files

L1 =W040587.D L2 =W040588.D L3 =W040589.D L4 =W040590.D  
 L5 =W040591.D L6 =W040592.D L7 =W040593.D icv =W040594.D

Compound	L1	L2	L3	L4	L5	L6	L7	icv	Avg %RSD
1) I Naphthalene-d8	-----ISTD-----								
2) Nitrobenzene	0.345	0.354	0.358	0.358	0.348	0.332	0.315	0.344	4.52
3) N-nitroso-di		0.110	0.100	0.111	0.101	0.088	0.094	0.101	8.87
4) Naphthalene	1.092	1.075	1.023	1.013	0.973	0.816	0.795	0.970	12.25
5) 2-Methylnaph	0.736	0.733	0.710	0.701	0.671	0.612	0.562	0.675	9.69
6) 1-Methylnaph	0.703	0.690	0.665	0.649	0.637	0.552	0.537	0.633	10.27
7) I Acenaphthene-d10	-----ISTD-----								
8) Hexachlorocy		0.204	0.249	0.262	0.284	0.287	0.270	0.259	11.78
9) 2-Fluorobiph	1.629	1.607	1.881	1.573	1.847	1.696	1.566	1.686	7.69
10) Acenaphthyle	1.963	1.942	1.923	1.876	1.848	1.620	1.605	1.825	8.25
11) Acenaphthene	1.249	1.232	1.219	1.189	1.166	1.087	0.956	1.157	8.94
12) 2,4-Dinitrop		0.044	0.076	0.112	0.149	0.155	0.171	0.118	42.16
13) 4-Nitropheno		0.185	0.209	0.224	0.239	0.212	0.236	0.218	9.24
14) Fluorene	1.324	1.294	1.292	1.271	1.219	1.143	1.058	1.229	7.83
15) I Phenanthrene-d10	-----ISTD-----								
16) Phenanthrene	1.250	1.219	1.171	1.163	1.136	1.002	0.966	1.130	9.45
17) Anthracene	1.244	1.230	1.188	1.175	1.171	1.030	0.967	1.144	9.10
18) Carbazole	1.053	1.058	1.010	0.949	0.873	0.755	0.682	0.912	16.22
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 1.01539 *A + -0.02651 *A^2									
19) Fluoranthene	1.224	1.243	1.192	1.185	1.163	1.040	0.980	1.147	8.59
20) I Chrysene-d12	-----ISTD-----								
21) Pyrene	1.893	1.868	1.833	1.869	1.777	1.594	1.484	1.760	9.01
22) Terphenyl-d1	1.052	1.045	1.058	1.096	1.069	0.972	0.917	1.030	6.08
23) Benzo[a]anth	1.572	1.542	1.547	1.607	1.638	1.542	1.493	1.563	3.05
24) Chrysene	1.524	1.534	1.546	1.615	1.616	1.505	1.468	1.544	3.55
25) I Perylene-d12	-----ISTD-----								
26) Benzo[b]fluo	1.318	1.369	1.421	1.464	1.558	1.474	1.395	1.428	5.50
27) Benzo[k]fluo	1.459	1.466	1.484	1.543	1.604	1.547	1.543	1.521	3.46
28) Benzo[a]pyre	1.205	1.230	1.259	1.333	1.390	1.321	1.296	1.290	4.96
29) Indeno[1,2,3	0.917	0.935	0.968	1.044	1.071	1.045	1.014	0.999	5.96
30) Dibenz[a,h]a	0.911	0.964	0.995	1.054	1.091	1.035	1.023	1.010	5.92
31) Benzo[g,h,i]	1.110	1.164	1.161	1.215	1.241	1.182	1.142	1.173	3.75

(#) = Out of Range ### Number of calibration levels exceeded format ###

SIM\_PAHC.M

Tue May 20 11:02:03 2008

7.7  
7

## Instrument Performance Check (DFTPP)

Page 1 of 2

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2081-DFTPP	Injection Date: 05/20/08
Lab File ID: W040620.D	Injection Time: 12:24
Instrument ID: GCMSW	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	58333	32.3	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	62693	34.7	Pass
70	Less than 2.0% of mass 69	344	0.19 (0.55) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	83085	46.0	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	180624	100.0	Pass
199	5.0 - 9.0% of mass 198	12295	6.8	Pass
275	10.0 - 30.0% of mass 198	43477	24.1	Pass
365	1.0 - 100.0% of mass 198	3960	2.2	Pass
441	Present, but less than mass 443	16990	9.4 (77.0) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	115827	64.1	Pass
443	17.0 - 23.0% of mass 442	22063	12.2 (19.0) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2081-CC2079	W040621.D	05/20/08	12:40	00:16	Continuing cal 4
OP25106-MB	W040624.D	05/20/08	13:38	01:14	Method Blank
OP25106-BS	W040625.D	05/20/08	14:04	01:40	Blank Spike
ZZZZZZ	W040626.D	05/20/08	14:36	02:12	(unrelated sample)
ZZZZZZ	W040627.D	05/20/08	15:02	02:38	(unrelated sample)
F57485-3	W040628.D	05/20/08	15:28	03:04	(used for QC only; not part of job F57467)
OP25106-MS	W040629.D	05/20/08	15:54	03:30	Matrix Spike
OP25106-MSD	W040630.D	05/20/08	16:21	03:57	Matrix Spike Duplicate
OP25102-MB	W040631.D	05/20/08	16:47	04:23	Method Blank
F57608-2	W040632.D	05/20/08	17:13	04:49	(used for QC only; not part of job F57467)
OP25102-MS	W040633.D	05/20/08	17:40	05:16	Matrix Spike
OP25102-MSD	W040634.D	05/20/08	18:06	05:42	Matrix Spike Duplicate
ZZZZZZ	W040635.D	05/20/08	18:32	06:08	(unrelated sample)
ZZZZZZ	W040636.D	05/20/08	18:59	06:35	(unrelated sample)
ZZZZZZ	W040637.D	05/20/08	19:25	07:01	(unrelated sample)
F57467-6	W040638.D	05/20/08	19:51	07:27	KWSMMW-08-0508
F57467-7	W040639.D	05/20/08	20:17	07:53	KWSMMW-09D-0508
ZZZZZZ	W040640.D	05/20/08	20:43	08:19	(unrelated sample)
ZZZZZZ	W040641.D	05/20/08	21:09	08:45	(unrelated sample)

# Instrument Performance Check (DFTPP)

Page 2 of 2

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: SW2081-DFTPP

Injection Date: 05/20/08

Lab File ID: W040620.D

Injection Time: 12:24

Instrument ID: GCMSW

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W040642.D	05/20/08	21:35	09:11	(unrelated sample)
ZZZZZZ	W040643.D	05/20/08	22:01	09:37	(unrelated sample)
ZZZZZZ	W040644.D	05/20/08	22:27	10:03	(unrelated sample)
ZZZZZZ	W040645.D	05/20/08	22:54	10:30	(unrelated sample)
ZZZZZZ	W040646.D	05/20/08	23:19	10:55	(unrelated sample)
ZZZZZZ	W040647.D	05/20/08	23:45	11:21	(unrelated sample)
ZZZZZZ	W040648.D	05/21/08	00:12	11:48	(unrelated sample)

7.4

7

## Continuing Calibration Summary

Page 1 of 2

Job Number: F57467  
 Account: TETRAPPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2081-CC2079  
 Lab FileID: W040621.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\052008\W040621.D Vial: 2  
 Acq On : 20 May 2008 12:40 pm Operator: rayb  
 Sample : cc2079-4 Inst : MSBNA01  
 Misc : op25106,sw2081,1000,,,1,1,water Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Wed May 21 08:37:11 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	76	0.00	5.37
2 S	Nitrobenzene-d5	0.344	0.355	-3.2	78	0.00	4.77
3 P	N-nitroso-di-n-propylamin	0.101	0.095	5.9	72	0.00	4.66
4	Naphthalene	0.970	0.970	0.0	76	0.00	5.38
5	2-Methylnaphthalene	0.675	0.672	0.4	76	0.00	6.09
6	1-Methylnaphthalene	0.633	0.633	0.0	76	0.00	6.21
7 I	Acenaphthene-d10	1.000	1.000	0.0	76	0.00	7.44
8 P	Hexachlorocyclopentadiene	0.259	0.280	-8.1	75	0.00	6.27
9 S	2-Fluorobiphenyl	1.686	1.886	-11.9	77	0.00	6.55
10	Acenaphthylene	1.825	1.912	-4.8	78	0.00	7.23
11 C	Acenaphthene	1.157	1.173	-1.4	76	0.00	7.48
12 P	2,4-Dinitrophenol	0.118	0.150	-27.1#	76	0.01	7.61
13 P	4-Nitrophenol	0.218	0.239	-9.6	76	0.02	7.78
14	Fluorene	1.229	1.280	-4.1	80	0.00	8.29
15 I	Phenanthrene-d10	1.000	1.000	0.0	78	0.00	9.83
16	Phenanthrene	1.130	1.153	-2.0	79	0.00	9.87
17	Anthracene	1.144	1.188	-3.8	79	0.00	9.96
18	Carbazole	20.000	21.834	-9.2	85	0.00	10.31
19 C	Fluoranthene	1.147	1.190	-3.7	80	0.00	12.02
20 I	Chrysene-d12	1.000	1.000	0.0	78	0.00	14.68
21	Pyrene	1.760	1.812	-3.0	80	0.00	12.40
22 S	Terphenyl-d14	1.030	1.076	-4.5	79	0.00	12.85
23	Benzo[a]anthracene	1.563	1.632	-4.4	78	0.00	14.66
24	Chrysene	1.544	1.650	-6.9	80	0.00	14.72
25 I	Perylene-d12	1.000	1.000	0.0	76	0.00	17.16
26	Benzo[b]fluoranthene	1.428	1.524	-6.7	75	0.00	16.55
27	Benzo[k]fluoranthene	1.521	1.654	-8.7	79	0.00	16.59
28 C	Benzo[a]pyrene	1.290	1.389	-7.7	76	0.00	17.06
29	Indeno[1,2,3-cd]pyrene	0.999	0.950	4.9	68	0.00	18.71
30	Dibenz[a,h]anthracene	1.010	1.005	0.5	70	0.00	18.78
31	Benzo[g,h,i]perylene	1.173	1.150	2.0	71	0.00	19.05

## Continuing Calibration Summary

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample: SW2081-CC2079

Lab FileID: W040621.D

Page 2 of 2

(#) = Out of Range

W040591.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0

Wed May 21 08:37:55 2008

7.7

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## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2082-DFTPP	Injection Date: 05/21/08
Lab File ID: W040652.D	Injection Time: 13:57
Instrument ID: GCMSW	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	86339	31.6	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	95347	34.9	Pass
70	Less than 2.0% of mass 69	518	0.19 (0.54) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	124325	45.5	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	273347	100.0	Pass
199	5.0 - 9.0% of mass 198	18247	6.7	Pass
275	10.0 - 30.0% of mass 198	68549	25.1	Pass
365	1.0 - 100.0% of mass 198	6112	2.2	Pass
441	Present, but less than mass 443	29243	10.7 (76.8) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	195683	71.6	Pass
443	17.0 - 23.0% of mass 442	38065	13.9 (19.5) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2082-CC2079	W040653.D	05/21/08	14:20	00:23	Continuing cal 5
OP25131-BS	W040654.D	05/21/08	14:56	00:59	Blank Spike
OP25131-MB	W040655.D	05/21/08	15:23	01:26	Method Blank
ZZZZZZ	W040658.D	05/21/08	16:47	02:50	(unrelated sample)
ZZZZZZ	W040665.D	05/21/08	20:22	06:25	(unrelated sample)
ZZZZZZ	W040666.D	05/21/08	20:48	06:51	(unrelated sample)
ZZZZZZ	W040668.D	05/21/08	21:40	07:43	(unrelated sample)
ZZZZZZ	W040669.D	05/21/08	22:06	08:09	(unrelated sample)
ZZZZZZ	W040670.D	05/21/08	22:33	08:36	(unrelated sample)
ZZZZZZ	W040671.D	05/21/08	22:59	09:02	(unrelated sample)
OP25106-MB	W040672.D	05/21/08	23:25	09:28	Method Blank
ZZZZZZ	W040673.D	05/21/08	23:51	09:54	(unrelated sample)
ZZZZZZ	W040675.D	05/22/08	00:43	10:46	(unrelated sample)
ZZZZZZ	W040676.D	05/22/08	01:09	11:12	(unrelated sample)
ZZZZZZ	W040677.D	05/22/08	01:35	11:38	(unrelated sample)



## Continuing Calibration Summary

Page 1 of 2

Job Number: F57467  
 Account: TETRPAPT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: SW2082-CC2079  
 Lab FileID: W040653.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\052108\W040653.D Vial: 2  
 Acq On : 21 May 2008 2:20 pm Operator: rayb  
 Sample : cc2079-5 Inst : MSBNA01  
 Misc : op25131,sw2082,30.0,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu May 22 12:56:55 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	5.33
2 S	Nitrobenzene-d5	0.344	0.359	-4.4	94	0.00	4.74
3 P	N-nitroso-di-n-propylamin	0.101	0.104	-3.0	94	0.00	4.64
4	Naphthalene	0.970	0.933	3.8	88	0.00	5.35
5	2-Methylnaphthalene	0.675	0.670	0.7	91	0.00	6.06
6	1-Methylnaphthalene	0.633	0.620	2.1	89	0.00	6.16
7 I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.39
8 P	Hexachlorocyclopentadiene	0.259	0.284	-9.7	90	0.00	6.23
9 S	2-Fluorobiphenyl	1.686	1.560	7.5	76	0.00	6.50
10	Acenaphthylene	1.825	1.772	2.9	86	0.00	7.18
11 C	Acenaphthene	1.157	1.170	-1.1	90	0.00	7.43
12 P	2,4-Dinitrophenol	0.118	0.146	-23.7#	89	0.01	7.56
13 P	4-Nitrophenol	0.218	0.246	-12.8	93	0.02	7.73
14	Fluorene	1.229	1.226	0.2	91	0.01	8.24
15 I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00	9.77
16	Phenanthrene	1.130	1.132	-0.2	92	0.00	9.82
17	Anthracene	1.144	1.151	-0.6	91	0.01	9.92
18	Carbazole	Amount 20.000	Calc. 20.579	%Drift -2.9	95	0.02	10.26
19 C	Fluoranthene	AvgRF 1.147	CCRF 1.175	%Dev -2.4	93	0.02	11.96
20 I	Chrysene-d12	1.000	1.000	0.0	98	0.00	14.63
21	Pyrene	1.760	1.690	4.0	93	0.00	12.35
22 S	Terphenyl-d14	1.030	1.038	-0.8	95	0.00	12.80
23	Benzo[a]anthracene	1.563	1.577	-0.9	94	0.00	14.61
24	Chrysene	1.544	1.615	-4.6	98	0.00	14.67
25 I	Perylene-d12	1.000	1.000	0.0	95	0.00	17.09
26	Benzo[b]fluoranthene	1.428	1.546	-8.3	95	0.00	16.49
27	Benzo[k]fluoranthene	1.521	1.596	-4.9	95	0.00	16.54
28 C	Benzo[a]pyrene	1.290	1.376	-6.7	95	-0.06	17.00
29	Indeno[1,2,3-cd]pyrene	0.999	1.041	-4.2	93	-0.06	18.66
30	Dibenz[a,h]anthracene	1.010	1.085	-7.4	95	-0.06	18.72
31	Benzo[g,h,i]perylene	1.173	1.209	-3.1	93	-0.06	18.99

## Continuing Calibration Summary

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: SW2082-CC2079  
Lab FileID: W040653.D

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(#) = Out of Range

W040591.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0

Thu May 22 12:58:01 2008

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# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std: SR636-CC633	Injection Date: 05/15/08
Lab File ID: R13712.D	Injection Time: 12:17
Instrument ID: GCMSR	Method: SW846 8270C BY SIM

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	192594	5.78	97755	7.98	147026	10.46	103418	15.37	92764	17.87
Upper Limit <sup>a</sup>	385188	6.28	195510	8.48	294052	10.96	206836	15.87	185528	18.37
Lower Limit <sup>b</sup>	96297	5.28	48878	7.48	73513	9.96	51709	14.87	46382	17.37

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP25062-BS	190354	5.78	97343	7.98	145941	10.46	103491	15.38	91020	17.88
OP25062-MB	181060	5.78	87429	7.98	131909	10.46	91834	15.37	80945	17.87
ZZZZZZ	196684	5.78	101618	7.99	147643	10.47	104561	15.38	96436	17.88
ZZZZZZ	200699	5.78	104801	7.99	151566	10.47	108941	15.37	99384	17.88
ZZZZZZ	204278	5.78	103470	7.98	155695	10.46	112382	15.37	104973	17.87
ZZZZZZ	193965	5.80	104114	7.99	146008	10.47	107095	15.38	100624	17.88
ZZZZZZ	206535	5.78	109776	7.99	161444	10.47	111304	15.38	99694	17.88
ZZZZZZ	182496	5.78	92346	7.98	139971	10.46	96550	15.37	86505	17.87
ZZZZZZ	206512	5.78	103440	7.98	157747	10.46	113583	15.38	105479	17.88
ZZZZZZ	213932	5.78	109182	7.98	162367	10.46	117324	15.38	105667	17.88
ZZZZZZ	207961	5.78	107567	7.98	164075	10.46	117743	15.38	106475	17.88
F57465-6	200990	5.78	102674	7.98	157910	10.46	111641	15.37	98288	17.88
OP25062-MS	217770	5.78	112227	7.98	168418	10.46	115821	15.37	105223	17.88
OP25062-MSD	213919	5.78	109931	7.98	167273	10.46	118889	15.37	105921	17.88
ZZZZZZ	212221	5.78	107211	7.98	164430	10.46	117415	15.37	104894	17.88
ZZZZZZ	205216	5.78	105522	7.98	159632	10.46	111125	15.38	100575	17.88
F57467-1	210803	5.78	105454	7.98	161172	10.46	113785	15.37	101928	17.88
F57467-2	199847	5.78	101701	7.98	154481	10.46	108155	15.37	97583	17.88
F57467-3	199670	5.78	102133	7.98	156812	10.46	112287	15.37	101552	17.88
F57467-4	199939	5.78	100416	7.98	155145	10.46	111108	15.37	99759	17.88

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	SR637-CC633	Injection Date:	05/16/08
Lab File ID:	R13742.D	Injection Time:	14:12
Instrument ID:	GCMSR	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	235852	5.76	119878	7.96	176306	10.43	116394	15.34	94846	17.84
Upper Limit <sup>a</sup>	471704	6.26	239756	8.46	352612	10.93	232788	15.84	189692	18.34
Lower Limit <sup>b</sup>	117926	5.26	59939	7.46	88153	9.93	58197	14.84	47423	17.34

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP25062-MB	259825	5.76	129402	7.96	187376	10.43	122877	15.35	103868	17.85
ZZZZZZ	232514	5.76	119443	7.96	175244	10.43	118847	15.35	107584	17.84
ZZZZZZ	231445	5.76	118637	7.95	172873	10.43	115951	15.35	105028	17.85
ZZZZZZ	226003	5.76	109458	7.97	171804	10.46	121443	15.36	113258	17.86
ZZZZZZ	256441	5.76	132135	7.96	197471	10.43	134338	15.35	123030	17.85
ZZZZZZ	252874	5.76	132641	7.96	195310	10.43	134635	15.35	120855	17.85
F57467-5	270168	5.76	137224	7.95	205199	10.43	144810	15.35	134706	17.85
OP25084-MB	249962	5.76	124159	7.95	182021	10.42	119746	15.34	104167	17.85
ZZZZZZ	211329	5.76	110223	7.95	165415	10.43	115353	15.36	104000	17.87
ZZZZZZ	236129	5.77	128059	7.98	188300	10.45	133597	15.36	123391	17.86

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	SW2081-CC2079	Injection Date:	05/20/08
Lab File ID:	W040621.D	Injection Time:	12:40
Instrument ID:	GCM5W	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	266669	5.37	139136	7.44	202470	9.83	136794	14.68	119645	17.16
Upper Limit <sup>a</sup>	533338	5.87	278272	7.94	404940	10.33	273588	15.18	239290	17.66
Lower Limit <sup>b</sup>	133335	4.87	69568	6.94	101235	9.33	68397	14.18	59823	16.66

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
OP25106-MB	315215	5.37	165167	7.44	242609	9.83	167531	14.68	152654	17.16
OP25106-BS	292583	5.37	150089	7.44	216013	9.83	148202	14.68	133292	17.15
ZZZZZZ	293607	5.36	153540	7.44	221907	9.83	157191	14.68	142683	17.15
ZZZZZZ	327357	5.37	171621	7.44	248445	9.83	173199	14.68	155375	17.16
F57485-3	327812	5.36	172177	7.44	251085	9.83	171320	14.68	152814	17.16
OP25106-MS	332884	5.37	173446	7.44	255374	9.83	176164	14.68	158888	17.16
OP25106-MSD	336440	5.37	177973	7.44	256948	9.83	176636	14.68	159034	17.16
OP25102-MB	276486	5.36	146543	7.44	213158	9.82	143768	14.68	125726	17.15
F57608-2	303457	5.37	161868	7.45	204194	9.86	126276	14.73	108514	17.23
OP25102-MS	277511	5.37	144844	7.45	202238	9.84	135154	14.72	119370	17.20
OP25102-MSD	285199	5.37	145870	7.46	195086	9.87	121876	14.74	98896	17.23
ZZZZZZ	304104	5.37	163189	7.44	230529	9.84	149242	14.70	124415	17.18
ZZZZZZ	307376	5.37	164069	7.44	228850	9.84	147668	14.72	121104	17.20
ZZZZZZ	351157	5.36	186123	7.44	258517	9.84	163838	14.72	133227	17.21
F57467-6	351423	5.37	200616	7.44	289932	9.84	176546	14.70	148986	17.17
F57467-7	347401	5.36	192711	7.44	278797	9.84	178189	14.70	155283	17.17
ZZZZZZ	362445	5.37	201531	7.44	294629	9.84	194967	14.70	164275	17.18
ZZZZZZ	387568	5.37	202820	7.44	296643	9.84	190680	14.70	159416	17.17
ZZZZZZ	398265	5.37	205219	7.44	293307	9.84	187407	14.69	159460	17.18
ZZZZZZ	297375	5.40	193142	7.45	267051	9.84	161782	14.69	136449	17.18
ZZZZZZ	363477	5.37	191220	7.44	272031	9.84	177717	14.69	148298	17.17
ZZZZZZ	360286	5.37	188861	7.44	267689	9.84	177246	14.70	157264	17.18
ZZZZZZ	348899	5.37	181501	7.44	262598	9.84	170029	14.70	143436	17.17
ZZZZZZ	374831	5.37	195321	7.44	276188	9.84	177078	14.70	149594	17.17
ZZZZZZ	357565	5.37	189242	7.44	272775	9.84	177139	14.69	139887	17.18

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	SW2082-CC2079	Injection Date:	05/21/08
Lab File ID:	W040653.D	Injection Time:	14:20
Instrument ID:	GCMSW	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	319552	5.33	165682	7.39	238393	9.77	170884	14.63	149462	17.09
Upper Limit <sup>a</sup>	639104	5.83	331364	7.89	476786	10.27	341768	15.13	298924	17.59
Lower Limit <sup>b</sup>	159776	4.83	82841	6.89	119197	9.27	85442	14.13	74731	16.59

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP25131-BS	275716	5.33	143690	7.39	207136	9.77	147957	14.62	132893	17.09
OP25131-MB	304322	5.32	158624	7.39	229810	9.77	166184	14.62	151455	17.09
ZZZZZZ	314424	5.33	164788	7.39	232623	9.77	160344	14.63	132855	17.09
ZZZZZZ	297564	5.34	155003	7.40	215029	9.80	129134	14.66	107553	17.15
ZZZZZZ	295729	5.33	154553	7.40	215340	9.79	129390	14.65	110398	17.13
ZZZZZZ	347748	5.33	179850	7.40	233960	9.80	126519	14.67	96938	17.16
ZZZZZZ	309145	5.34	158646	7.40	216371	9.80	128174	14.67	102459	17.16
ZZZZZZ	310012	5.34	157632	7.40	212852	9.80	129302	14.66	105465	17.14
ZZZZZZ	354594	5.34	183363	7.40	252558	9.80	156524	14.66	127299	17.15
OP25106-MB	317684	5.34	168920	7.40	245537	9.80	180283	14.66	151504	17.14
ZZZZZZ	305194	5.34	160411	7.40	238353	9.80	169198	14.66	134940	17.14
ZZZZZZ	318055	5.34	163463	7.40	226247	9.80	147662	14.66	122514	17.14
ZZZZZZ	346387	5.34	175914	7.40	254603	9.80	177965	14.67	146031	17.16
ZZZZZZ	321065	5.34	168032	7.40	240228	9.80	169359	14.67	136991	17.15

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Method: FLORIDA-PRO

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 <sup>a</sup>
F57467-1	IJ47335.D	81.0
F57467-2	IJ47350.D	92.0
F57467-3	IJ47337.D	121.0
F57467-4	IJ47338.D	119.0
F57467-5	IJ47339.D	99.0
F57467-6	IJ47340.D	93.0
F57467-7	IJ47349.D	80.0
OP25066-BS	IJ47324.D	106.0
OP25066-MB	IJ47325.D	117.0
OP25066-MB	IJ47348.D	75.0
OP25066-MS	IJ47329.D	103.0
OP25066-MSD	IJ47330.D	109.0

Surrogate  
Compounds

Recovery  
Limits

S1 = o-Terphenyl

38-122%

(a) Recovery from GC signal #1

9.4  
9

# GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	GJ1780-CC1772	Injection Date:	05/17/08
Lab File ID:	IJ47321.D	Injection Time:	05:11
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1 <sup>a</sup>  
RT

Check Std	5.43
-----------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP25066-BS	IJ47324.D	05/17/08	06:17	5.43
OP25066-MB	IJ47325.D	05/17/08	06:39	5.43
ZZZZZZ	IJ47326.D	05/17/08	07:01	5.43
ZZZZZZ	IJ47327.D	05/17/08	07:23	5.43
F57466-3	IJ47328.D	05/17/08	07:45	5.43
OP25066-MS	IJ47329.D	05/17/08	08:07	5.43
OP25066-MSD	IJ47330.D	05/17/08	08:29	5.43
ZZZZZZ	IJ47331.D	05/17/08	08:51	5.44
ZZZZZZ	IJ47332.D	05/17/08	09:13	5.44

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

6.5  
9



# GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	GIJ1780-CC1772	Injection Date:	05/17/08
Lab File ID:	IJ47333.D	Injection Time:	09:35
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1 <sup>a</sup>  
RT

Check Std	5.43
-----------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
F57467-1	IJ47335.D	05/17/08	10:19	5.43
F57467-3	IJ47337.D	05/17/08	11:03	5.43
F57467-4	IJ47338.D	05/17/08	11:25	5.43
F57467-5	IJ47339.D	05/17/08	11:47	5.43
F57467-6	IJ47340.D	05/17/08	12:09	5.43
GIJ1780-ECC1772	IJ47342.D	05/17/08	12:53	5.43

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5  
9

## GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Check Std:	GIJ1781-CC1772	Injection Date:	05/19/08
Lab File ID:	IJ47345.D	Injection Time:	09:25
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1<sup>a</sup>  
RT

Check Std	5.43
-----------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP25066-MB	IJ47348.D	05/19/08	10:32	5.43
F57467-7	IJ47349.D	05/19/08	10:54	5.43
F57467-2	IJ47350.D	05/19/08	11:16	5.43

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5

9

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57467

Account: TETRPAPT Tetra Tech NUS

Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25066-MS	IJ47329.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
OP25066-MSD	IJ47330.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780
F57466-3	IJ47328.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	F57466-3 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C8-C40)	1.68	1.63	3.55	114*	3.65	121*	3	54-110/28

CAS No.	Surrogate Recoveries	MS	MSD	F57466-3	Limits
84-15-1	o-Terphenyl	103%	109%	100%	38-122%

## Blank Spike Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25066-BS	IJ47324.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C8-C40)	0.85	0.782	92	54-110

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	106%	38-122%

9.2

6

## Method Blank Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25066-MB	IJ47325.D	1	05/17/08	JB	05/14/08	OP25066	GIJ1780

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	117% 38-122%

9.1

9

## Method Blank Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25066-MB	IJ47348.D	1	05/19/08	JB	05/14/08	OP25066	GIJ1781

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57467-1, F57467-2, F57467-3, F57467-4, F57467-5, F57467-6, F57467-7

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	75% 38-122%

9.1

9

## Initial Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1772-ICC1772  
Lab FileID: IJ46879.D

## Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Mon May 05 13:33:36 2008  
Response via : Initial Calibration

## Calibration Files

255 =IJ46876.D 340 =IJ46877.D 680 =IJ46878.D 1020=IJ46879.D  
1360=IJ46880.D 1700=IJ46881.D 2125=IJ46882.D 4250=IJ46883.D

Compound	255	340	680	1020	1360	1700	2125	4250	Avg %RSD
1) O-TERPHENYL	3.650	3.617	3.546	3.555	3.495	2.834		3.449 E4	8.89
2) TPH (C8-C40)	3.632	3.435	3.400	3.354	3.286	2.654	3.280	3.265 3.288 E4	8.60

(#) = Out of Range ### Number of calibration levels exceeded format ###

FL\_PRO\_F.M

Tue May 06 09:29:38 2008

9.6  
6

## Continuing Calibration Summary

Job Number: F57467  
Account: TETRPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1780-CC1772  
Lab FileID: IJ47321.D

Page 1 of 1

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0516PRO\IJ47321.D Vial: 45  
Acq On : 17 May 2008 5:11 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25075,gij1780,30.0,,,1,1,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	64.322	-7.2	104	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1099.490	-7.8	106	0.00	2.24-10.83

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Mon May 19 09:16:33 2008

6 9.6



## Continuing Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1780-CC1772  
Lab FileID: IJ47322.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0516PRO\IJ47322.D Vial: 46  
Acq On : 17 May 2008 5:33 am Operator: julieb  
Sample : cc1772-340 Inst : FID 1  
Misc : op25075,gij1780,30.0,,,1,1,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	20.000	22.117	-10.6	105	0.00	5.38-	5.48
2 H	TPH (C8-C40)	340.000	396.345	-16.6	112	0.00	2.24-	10.83

(#)= Out of Range

SPCC's out = 0 CCC's out = 0

IJ46877.D FL\_PRO\_F.M

Mon May 19 09:16:55 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1780-CC1772  
Lab FileID: IJ47333.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0516PRO\IJ47333.D Vial: 56  
Acq On : 17 May 2008 9:35 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25066,gij1780,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	65.580	-9.3	106	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1111.461	-9.0	107	0.00	2.24-10.83

(# ) = Out of Range

IJ46879.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Mon May 19 09:16:33 2008

96  
6

# Continuing Calibration Summary

Job Number: F57467  
 Account: TETRAPAT Tetra Tech NUS  
 Project: NAS Key West, Key West, FL

Sample: GIJ1780-ECC1772  
 Lab FileID: IJ47342.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0516PRO\IJ47342.D Vial: 64  
 Acq On : 17 May 2008 12:53 pm Operator: julieb  
 Sample : ecc1772-1020 Inst : FID 1  
 Misc : op25066,gij1780,1000,,,1,1,water Multiplr: 1.00  
 IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
 Title : TPH by FL\_PRO  
 Last Update : Fri May 16 11:20:03 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound		Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	60.000	64.607	-7.7	104	0.00	5.38	5.48
2 H	TPH (C8-C40)	1020.000	1091.452	-7.0	105	0.00	2.24	10.83

(#) = Out of Range

IJ46879.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Mon May 19 09:16:33 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAPT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1781-CC1772  
Lab FileID: IJ47345.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47345.D Vial: 2  
Acq On : 19 May 2008 9:25 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25066,gij1781,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	52.687	12.2	85	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	884.558	13.3	85	0.00	2.24-10.83

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Wed May 21 09:19:47 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GJ1781-CC1772  
Lab FileID: IJ47346.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47346.D Vial: 3  
Acq On : 19 May 2008 9:47 am Operator: julieb  
Sample : cc1772-340 Inst : FID 1  
Misc : op25066,gij1781,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	20.000	18.201	9.0	87	0.00	5.38- 5.48
2 H	TPH (C8-C40)	340.000	316.725	6.8	89	0.00	2.24-10.83

(# ) = Out of Range

IJ46877.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Wed May 21 09:20:11 2008

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57467  
Account: TETRAPAT Tetra Tech NUS  
Project: NAS Key West, Key West, FL

Sample: GIJ1781-CC1772  
Lab FileID: IJ47351.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47351.D Vial: 7  
Acq On : 19 May 2008 11:38 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25074,gij1781,1030,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	64.211	-7.0	104	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1082.768	-6.2	104	0.00	2.24-10.83

(# ) = Out of Range

IJ46879.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Wed May 21 09:19:47 2008



**Tetra Tech NUS**

**INTERNAL CORRESPONDENCE**

**TO:** C. BRYAN **DATE:** JULY 28, 2008  
**FROM:** TREVER SHEETS **COPIES:** DV FILE  
**SUBJECT:** ORGANIC DATA VALIDATION- VOC / PAH / TPH  
CTO 0095, NAS KEY WEST  
SDG F57525  
**SAMPLES:** 2/Aqueous/VOC/PAH/TPH  
KWSM-GW-DRUM-1 KWSM-BCTF-GW-DRUM-3  
2/Soil/VOC/PAH/TPH  
KWSM-SO-GW-DRUM-2 KWSM-SO-DRUM-4

**OVERVIEW**

The sample set for CTO 0095 NAS Key West, SDG F57525 consists of four (4) aqueous environmental samples. No field duplicate pairs were associated with this SDG.

Samples were analyzed for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAH), and total petroleum hydrocarbons (TPH).

The samples were collected by TetraTech NUS on May 14, 2008 and analyzed by Accutest Laboratories. All analyses were conducted in accordance with SW-846 Methods 8260B, 8270C, and Florida-PRO analysis and reporting protocols. The data contained in this SDG were validated with regard to the following parameters:

- \* • Data Completeness
- \* • Holding Times
- \* • Initial/Continuing Calibrations
- Laboratory Method Blank Results
- \* • Detection Limits

The symbol (\*) indicates that quality control criteria were met for this parameter. Problems affecting data quality are discussed below; documentation supporting these findings is presented in Appendix C. Qualified Analytical results are presented in Appendix A. Results as reported by the laboratory are presented in Appendix B.

The text of this report is formatted to address only gross non-compliances resulting in the rejection of data and the elimination of false positives.

**VOC**

The initial calibration percent relative standard deviation (%RSD) for methylene chloride was greater than the 30% quality control limit but less than 90% on instrument GCMSG on 5/5/08. No actions were necessary as no positive results were reported for this compound in samples KWSM-SO-DRUM-2 and KWSM-SO-DRUM-4 and non-detects are not impacted for this noncompliance in a limited data review.

The continuing calibration percent difference (%D) for 2-chloroethyl vinyl ether and acrolein was greater than the 25% quality control limit but less than 90% on instrument GCMSG on 5/19/08 at 9:54. No actions were necessary as no positive results were reported for this compound in samples KWSM-SO-DRUM-2 and KWSM-SO-DRUM-4 and non-detects are not impacted for this noncompliance in a limited data review.

The initial calibration %RSD for 2-chloroethyl vinyl ether was greater than the 30% quality control limit but less than 90% on instrument GCMSJ on 5/27/08. No actions were necessary as no positive results were reported for this compound in samples KWSM-BCTF-GW-DRUM-3 and KWSM-GW-DRUM-1 and nondetects are not impacted for this noncompliance in a limited data review.

The laboratory control sample VG1912-BS yielded a high percent recovery for 2-chloroethyl vinyl ether. No actions were necessary as no positive results were reported for this compound in the affected samples and this is a limited data review.

The internal standard tert butyl alcohol-D10 was low in sample KWSM-SO-DRUM-2. No action was necessary from this noncompliance alone as this is a limited data review.

The following compound was detected in the method blank at the following maximum concentration:

<u>Compound</u>	<u>Maximum Concentration</u>	<u>Action Level</u>
Methylene Chloride	7.0 ug/L	70 ug/L

An action level of 10X the maximum concentration was used to evaluate samples KWSM-SO-DRUM-2 and KWSM-SO-DRUM-4 for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No action was necessary because methylene chloride not detected in associated samples.

#### Polynuclear Aromatic Hydrocarbons

Sample KWSM-SO-DRUM-2 was analyzed at a 4 fold dilution due to concentrations of benzo(b)fluoranthene and benzo(g,h,i)perylene greater than the linear calibration range of the instrument. No undiluted samples were provided and this accounts for the elevated detection limits for the non-detected compounds.

Sample KWSM-SO-DRUM-4 was analyzed at a 4 fold dilution due to concentration of benzo(b)fluoranthene and benzo(g,h,i)perylene greater than the linear calibration range of the instrument. No undiluted samples were provided and this accounts for the elevated detection limits for the non-detected compounds.

#### Total Petroleum Hydrocarbons

No qualification of the data was necessary.

#### EXECUTIVE SUMMARY


**Laboratory Performance Issues:** The VOC fractions had initial calibration percent relative standard deviation noncompliances in 4 samples on 5/5/08 and 5/27/08 with instruments GCMSG and GCMSJ. Continuing calibration percent difference noncompliance in 2 samples on 5/19/08 at 9:54 with instrument GCMSG.

**Other Factors Affecting Data Quality:** Two samples analyzed at a 4 fold dilution.


The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), and the Department of Defense (DoD) document entitled "Quality Systems Manual (QSM) for Environmental Laboratories" (January 2006). The text of this report has been formulated to address only those problem areas affecting data quality.



"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the DoD QSM for Environmental Laboratories.



Tetra Tech NUS  
Trevor Sheets  
Data Validator



TetraTech NUS  
  
Joseph A. Samchuck  
Data Validation Quality Assurance Officer

Attachments:

- Appendix A – Qualified Analytical Results
- Appendix B – Results as Reported by the Laboratory
- Appendix C – Support Documentation

**APPENDIX A**

**QUALIFIED ANALYTICAL RESULTS**

**Data Validation Qualifier Codes:**

- A = Lab Blank Contamination
- B = Field Blank Contamination
- C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
- C01 = GC/MS Tuning Noncompliance
- D = MS/MSD Recovery Noncompliance
- E = LCS/LCSD Recovery Noncompliance
- F = Lab Duplicate Imprecision
- G = Field Duplicate Imprecision
- H = Holding Time Exceedance
- I = ICP Serial Dilution Noncompliance
- J = GFAA PDS - GFAA MSA's  $r < 0.995$
- K = ICP Interference - includes ICS % R Noncompliance
- L = Instrument Calibration Range Exceedance
- M = Sample Preservation Noncompliance
- N = Internal Standard Noncompliance
- N01 = Internal Standard Recovery Noncompliance Dioxins
- N02 = Recovery Standard Noncompliance Dioxins
- N03 = Clean-up Standard Noncompliance Dioxins
- O = Poor Instrument Performance (e.g. base-line drifting)
- P = Uncertainty near detection limit ( $< 2 \times \text{IDL}$  for inorganics and  $< \text{CRQL}$  for organics)
- Q = Other problems (can be any number of issues; e.g. poor chromatography, interferences, etc.)
- R = Surrogates Recovery Noncompliance
- S = Pesticide/PCB Resolution
- T = % Breakdown Noncompliance for DDT and Endrin
- U = % Difference between columns/detectors  $> 25\%$  for positive results determined via GC/HPLC
- V = Non-linear calibrations; correlation coefficient  $r < 0.995$
- W = EMPC result
- X = Signal to noise response drop
- Y = Percent solids  $< 30\%$
- Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ\_NO: 00979

SDG: F57525 MEDIA: SOIL DATA FRACTION: OV

nsample KWSM-SO-DRUM-2  
samp\_date 5/14/2008  
lab\_id F57525-2  
qc\_type NM  
units UG/KG  
Pct\_Solids 89.4  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.93	U	U	
1,1,2,2-TETRACHLOROETHANE	1.2	U	U	
1,1,2-TRICHLOROETHANE	0.93	U	U	
1,1-DICHLOROETHANE	1	U	U	
1,1-DICHLOROETHENE	0.93	U	U	
1,2-DICHLOROBENZENE	0.93	U	U	
1,2-DICHLOROETHANE	0.93	U	U	
1,2-DICHLOROPROPANE	1.2	U	U	
1,3-DICHLOROBENZENE	0.93	U	U	
1,4-DICHLOROBENZENE	0.93	U	U	
2-CHLOROETHYL VINYL ETHER	4.7	U	U	
ACROLEIN	10	U	U	
ACRYLONITRILE	7.4	U	U	
BENZENE	0.93	U	U	
BROMODICHLOROMETHANE	0.93	U	U	
BROMOFORM	0.93	U	U	
BROMOMETHANE	1.7	U	U	
CARBON TETRACHLORIDE	1.2	U	U	
CHLOROBENZENE	0.93	U	U	
CHLORODIBROMOMETHANE	0.93	U	U	
CHLOROETHANE	2.4	U	U	
CHLOROFORM	0.93	U	U	
CHLOROMETHANE	1.9	U	U	
CIS-1,2-DICHLOROETHENE	0.93	U	U	
CIS-1,3-DICHLOROPROPENE	0.93	U	U	
DICHLORODIFLUOROMETHANE	1.9	U	U	
ETHYLBENZENE	0.93	U	U	
METHYL TERT-BUTYL ETHER	0.93	U	U	
METHYLENE CHLORIDE	4.7	U	U	
TETRACHLOROETHENE	0.93	U	U	
TOLUENE	0.93	U	U	
TOTAL XYLENES	2	U	U	

nsample KWSM-SO-DRUM-2  
samp\_date 5/14/2008  
lab\_id F57525-2  
qc\_type NM  
units UG/KG  
Pct\_Solids 89.4  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.93	U	U	
TRANS-1,3-DICHLOROPROPENE	0.93	U	U	
TRICHLOROETHENE	0.93	U	U	
TRICHLOROFLUOROMETHANE	1.5	U	U	
VINYL CHLORIDE	1.3	U	U	

nsample KWSM-SO-DRUM-4  
samp\_date 5/14/2008  
lab\_id F57525-4  
qc\_type NM  
units UG/KG  
Pct\_Solids 87.3  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	1.1	U	U	
1,1,2,2-TETRACHLOROETHANE	1.5	U	U	
1,1,2-TRICHLOROETHANE	1.1	U	U	
1,1-DICHLOROETHANE	1.3	U	U	
1,1-DICHLOROETHENE	1.1	U	U	
1,2-DICHLOROBENZENE	1.1	U	U	
1,2-DICHLOROETHANE	1.1	U	U	
1,2-DICHLOROPROPANE	1.5	U	U	
1,3-DICHLOROBENZENE	1.1	U	U	
1,4-DICHLOROBENZENE	1.1	U	U	
2-CHLOROETHYL VINYL ETHER	5.7	U	U	
ACROLEIN	13	U	U	
ACRYLONITRILE	9	U	U	
BENZENE	1.1	U	U	
BROMODICHLOROMETHANE	1.1	U	U	
BROMOFORM	1.1	U	U	
BROMOMETHANE	2.1	U	U	
CARBON TETRACHLORIDE	1.5	U	U	
CHLOROBENZENE	1.1	U	U	
CHLORODIBROMOMETHANE	1.1	U	U	
CHLOROETHANE	3	U	U	
CHLOROFORM	1.1	U	U	
CHLOROMETHANE	2.3	U	U	
CIS-1,2-DICHLOROETHENE	1.1	U	U	
CIS-1,3-DICHLOROPROPENE	1.1	U	U	
DICHLORODIFLUOROMETHANE	2.3	U	U	
ETHYLBENZENE	1.1	U	U	
METHYL TERT-BUTYL ETHER	1.1	U	U	
METHYLENE CHLORIDE	5.7	U	U	
TETRACHLOROETHENE	1.1	U	U	
TOLUENE	1.1	U	U	
TOTAL XYLENES	2.4	U	U	

**PROJ\_NO: 00979**

SDG: F57525 MEDIA: SOIL DATA FRACTION: OV

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nsample KWSM-SO-DRUM-4  
samp\_date 5/14/2008  
lab\_id F57525-4  
qc\_type NM  
units UG/KG  
Pct\_Solids 87.3  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1.1	U	U	
TRANS-1,3-DICHLOROPROPENE	1.1	U	U	
TRICHLOROETHENE	1.1	U	U	
TRICHLOROFLUOROMETHANE	1.8	U	U	
VINYL CHLORIDE	1.6	U	U	

PROJ\_NO: 00979

SDG: F57525 MEDIA: SOIL DATA FRACTION: PAH

nsample KWSM-SO-DRUM-2  
samp\_date 5/14/2008  
lab\_id F57525-2  
qc\_type NM  
units UG/KG  
Pct\_Solids 89.4  
DUP\_OF:

nsample KWSM-SO-DRUM-4  
samp\_date 5/14/2008  
lab\_id F57525-4  
qc\_type NM  
units UG/KG  
Pct\_Solids 87.3  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	44	U	U	
2-METHYLNAPHTHALENE	44	U	U	
ACENAPHTHENE	74	U	U	
ACENAPHTHYLENE	74	U	U	
ANTHRACENE	44	U	U	
BENZO(A)ANTHRACENE	15	U	U	
BENZO(A)PYRENE	15	U	U	
BENZO(B)FLUORANTHENE	24.8	I	J	P
BENZO(G,H,I)PERYLENE	16.6	I	J	P
BENZO(K)FLUORANTHENE	15	U	U	
CHRYSENE	15	U	U	
DIBENZO(A,H)ANTHRACENE	15	U	U	
FLUORANTHENE	52	U	U	
FLUORENE	44	U	U	
INDENO(1,2,3-CD)PYRENE	15	U	U	
NAPHTHALENE	44	U	U	
PHENANTHRENE	44	U	U	
PYRENE	52	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	46	U	U	
2-METHYLNAPHTHALENE	46	U	U	
ACENAPHTHENE	77	U	U	
ACENAPHTHYLENE	77	U	U	
ANTHRACENE	46	U	U	
BENZO(A)ANTHRACENE	15	U	U	
BENZO(A)PYRENE	15	U	U	
BENZO(B)FLUORANTHENE	15	U	U	
BENZO(G,H,I)PERYLENE	15	U	U	
BENZO(K)FLUORANTHENE	15	U	U	
CHRYSENE	15	U	U	
DIBENZO(A,H)ANTHRACENE	15	U	U	
FLUORANTHENE	54	U	U	
FLUORENE	46	U	U	
INDENO(1,2,3-CD)PYRENE	15	U	U	
NAPHTHALENE	46	U	U	
PHENANTHRENE	46	U	U	
PYRENE	54	U	U	

**PROJ\_NO: 00979**

SDG: F57525 MEDIA: SOIL DATA FRACTION: PET

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nsample KWSM-SO-DRUM-2  
samp\_date 5/14/2008  
lab\_id F57525-2  
qc\_type NM  
units MG/KG  
Pct\_Solids 89.4  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	14.4			

nsample KWSM-SO-DRUM-4  
samp\_date 5/14/2008  
lab\_id F57525-4  
qc\_type NM  
units MG/KG  
Pct\_Solids 87.3  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	13.8			

PROJ\_NO: 00979

SDG: F57525 MEDIA: WATER DATA FRACTION: OV

nsample KWSM-BCTF-GW-DRUM-3  
samp\_date 5/14/2008  
lab\_id F57525-3  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

nsample KWSM-BCTF-GW-DRUM-3  
samp\_date 5/14/2008  
lab\_id F57525-3  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

nsample KWSM-GW-DRUM-1  
samp\_date 5/14/2008  
lab\_id F57525-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	0.2	I	J	P
BROMODICHLOROMETHANE	0.29	U	U	
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	0.21	U	U	
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	1.1			
METHYL TERT-BUTYL ETHER	0.25	U	U	
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	0.27	U	U	
TOTAL XYLENES	21.7			

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1,1,1-TRICHLOROETHANE	0.29	U	U	
1,1,2,2-TETRACHLOROETHANE	0.37	U	U	
1,1,2-TRICHLOROETHANE	0.3	U	U	
1,1-DICHLOROETHANE	0.25	U	U	
1,1-DICHLOROETHENE	0.23	U	U	
1,2-DICHLOROBENZENE	0.2	U	U	
1,2-DICHLOROETHANE	0.2	U	U	
1,2-DICHLOROPROPANE	0.25	U	U	
1,3-DICHLOROBENZENE	0.23	U	U	
1,4-DICHLOROBENZENE	0.22	U	U	
2-CHLOROETHYL VINYL ETHER	1.2	U	U	
ACROLEIN	9	U	U	
ACRYLONITRILE	2	U	U	
BENZENE	1.3			
BROMODICHLOROMETHANE	0.57	I	J	P
BROMOFORM	0.28	U	U	
BROMOMETHANE	0.54	U	U	
CARBON TETRACHLORIDE	0.29	U	U	
CHLOROBENZENE	0.2	U	U	
CHLORODIBROMOMETHANE	0.2	U	U	
CHLOROETHANE	0.46	U	U	
CHLOROFORM	4.2			
CHLOROMETHANE	0.38	U	U	
CIS-1,2-DICHLOROETHENE	0.28	U	U	
CIS-1,3-DICHLOROPROPENE	0.24	U	U	
DICHLORODIFLUOROMETHANE	1	U	U	
ETHYLBENZENE	11.4			
METHYL TERT-BUTYL ETHER	6			
METHYLENE CHLORIDE	1	U	U	
TETRACHLOROETHENE	0.25	U	U	
TOLUENE	7.5			
TOTAL XYLENES	73.6			



PROJ\_NO: 00979

SDG: F57525 MEDIA: WATER DATA FRACTION: OV

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nsample KWSM-GW-DRUM-1  
samp\_date 5/14/2008  
lab\_id F57525-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.2	U	U	
TRANS-1,3-DICHLOROPROPENE	0.21	U	U	
TRICHLOROETHENE	0.38	U	U	
TRICHLOROFLUOROMETHANE	0.43	U	U	
VINYL CHLORIDE	0.34	U	U	

PROJ\_NO: 00979

SDG: F57525 MEDIA: WATER DATA FRACTION: PAH

nsample KWSM-BCTF-GW-DRUM-3  
samp\_date 5/14/2008  
lab\_id F57525-3  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

nsample KWSM-GW-DRUM-1  
samp\_date 5/14/2008  
lab\_id F57525-1  
qc\_type NM  
units UG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	5.2			
2-METHYLNAPHTHALENE	3.5			
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.095	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.095	U	U	
BENZO(K)FLUORANTHENE	0.095	U	U	
CHRYSENE	0.095	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	3.9			
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

Parameter	Result	Lab Qual	Val Qual	Qual Code
1-METHYLNAPHTHALENE	0.89	I	I	
2-METHYLNAPHTHALENE	1.4			
ACENAPHTHENE	0.48	U	U	
ACENAPHTHYLENE	0.48	U	U	
ANTHRACENE	0.48	U	U	
BENZO(A)ANTHRACENE	0.048	U	U	
BENZO(A)PYRENE	0.096	U	U	
BENZO(B)FLUORANTHENE	0.048	U	U	
BENZO(G,H,I)PERYLENE	0.096	U	U	
BENZO(K)FLUORANTHENE	0.096	U	U	
CHRYSENE	0.096	U	U	
DIBENZO(A,H)ANTHRACENE	0.048	U	U	
FLUORANTHENE	0.24	U	U	
FLUORENE	0.24	U	U	
INDENO(1,2,3-CD)PYRENE	0.048	U	U	
NAPHTHALENE	2.3			
PHENANTHRENE	0.48	U	U	
PYRENE	0.24	U	U	

**PROJ\_NO: 00979**

SDG: F57525 MEDIA: WATER DATA FRACTION: PET

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nsample KWSM-BCTF-GW-DRUM-3  
samp\_date 5/14/2008  
lab\_id F57525-3  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.82			

nsample KWSM-GW-DRUM-1  
samp\_date 5/14/2008  
lab\_id F57525-1  
qc\_type NM  
units MG/L  
Pct\_Solids  
DUP\_OF:

Parameter	Result	Lab Qual	Val Qual	Qual Code
TPH (C08-C40)	0.389			

**PROJ\_NO: 00979**

SDG: F57525 MEDIA: SOIL DATA FRACTION: MISC

nsample

KWSM-SO-DRUM-2

samp\_date

5/14/2008

lab\_id

F57525-2

qc\_type

NM

Pct\_Solids

DUP\_OF:

nsample

KWSM-SO-DRUM-4

samp\_date

5/14/2008

lab\_id

F57525-4

qc\_type

NM

Pct\_Solids

DUP\_OF:

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	89.4			

Parameter	units	Result	Lab Qual	Val Qual	Qual Code
PERCENT SOLIDS	%	87.3			

**APPENDIX B**

**RESULTS AS REPORTED BY THE LABORATORY**

Accutest Laboratories

## Report of Analysis

Page 1 of 2

Client Sample ID:	KWSM-BCTF-GW-DRUM-3			Date Sampled:	05/14/08
Lab Sample ID:	F57525-3			Date Received:	05/15/08
Matrix:	AQ - Ground Water			Percent Solids:	n/a
Method:	SW846 8260B				
Project:	Sigsbee Marina; NAS Key West, FL				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J038631.D	1	05/28/08	JG	n/a	n/a	VJ2475
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	0.20	1.0	0.20	ug/l	I
75-27-4	Bromodichloromethane	0.29 U	1.0	0.29	ug/l	
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	0.21 U	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	1.1	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	0.25 U	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis



Client Sample ID:	KWSM-BCTF-GW-DRUM-3		
Lab Sample ID:	F57525-3	Date Sampled:	05/14/08
Matrix:	AQ - Ground Water	Date Received:	05/15/08
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Sigsbee Marina; NAS Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.27 U	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	21.7	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		87-116%
17060-07-0	1,2-Dichloroethane-D4	99%		76-127%
2037-26-5	Toluene-D8	110%		86-112%
460-00-4	4-Bromofluorobenzene	109%		84-120%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSM-GW-DRUM-1	Date Sampled:	05/14/08
Lab Sample ID:	F57525-1	Date Received:	05/15/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Sigsbee Marina; NAS Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J038630.D	1	05/28/08	JG	n/a	n/a	VJ2475
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	9.0 U	20	9.0	ug/l	
107-13-1	Acrylonitrile	2.0 U	10	2.0	ug/l	
71-43-2	Benzene	1.3	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	0.57	1.0	0.29	ug/l	I
75-25-2	Bromoform	0.28 U	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	0.20 U	1.0	0.20	ug/l	
75-00-3	Chloroethane	0.46 U	2.0	0.46	ug/l	
67-66-3	Chloroform	4.2	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	1.2 U	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	0.29 U	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	0.25 U	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	0.23 U	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	0.20 U	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	0.25 U	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	0.20 U	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	1.0 U	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	0.28 U	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	0.24 U	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	0.23 U	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	0.20 U	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	0.22 U	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.20 U	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	0.21 U	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	11.4	1.0	0.20	ug/l	
74-83-9	Methyl bromide	0.54 U	2.0	0.54	ug/l	
74-87-3	Methyl chloride	0.38 U	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.0 U	5.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	6.0	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	0.29 U	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	0.37 U	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	0.30 U	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	0.25 U	1.0	0.25	ug/l	

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID:	KWSM-GW-DRUM-1	Date Sampled:	05/14/08
Lab Sample ID:	F57525-1	Date Received:	05/15/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Sigsbee Marina; NAS Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	7.5	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	0.38 U	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	0.43 U	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	0.34 U	1.0	0.34	ug/l	
1330-20-7	Xylene (total)	73.6	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		87-116%
17060-07-0	1,2-Dichloroethane-D4	101%		76-127%
2037-26-5	Toluene-D8	105%		86-112%
460-00-4	4-Bromofluorobenzene	102%		84-120%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSM-SO-DRUM-2	Date Sampled:	05/14/08
Lab Sample ID:	F57525-2	Date Received:	05/15/08
Matrix:	SO - Soil	Percent Solids:	89.4
Method:	SW846 8260B		
Project:	Sigsbee Marina; NAS Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0050465.D	1	05/19/08	SH	n/a	n/a	VG1912
Run #2							

Run #	Initial Weight
Run #1	5.99 g
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	10 U	23	10	ug/kg	
107-13-1	Acrylonitrile	7.4 U	23	7.4	ug/kg	
71-43-2	Benzene	0.93 U	4.7	0.93	ug/kg	
75-27-4	Bromodichloromethane	0.93 U	4.7	0.93	ug/kg	
75-25-2	Bromoform	0.93 U	4.7	0.93	ug/kg	
108-90-7	Chlorobenzene	0.93 U	4.7	0.93	ug/kg	
75-00-3	Chloroethane	2.4 U	4.7	2.4	ug/kg	
67-66-3	Chloroform	0.93 U	4.7	0.93	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	4.7 U	23	4.7	ug/kg	
56-23-5	Carbon tetrachloride	1.2 U	4.7	1.2	ug/kg	
75-34-3	1,1-Dichloroethane	1.0 U	4.7	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	0.93 U	4.7	0.93	ug/kg	
107-06-2	1,2-Dichloroethane	0.93 U	4.7	0.93	ug/kg	
78-87-5	1,2-Dichloropropane	1.2 U	4.7	1.2	ug/kg	
124-48-1	Dibromochloromethane	0.93 U	4.7	0.93	ug/kg	
75-71-8	Dichlorodifluoromethane	1.9 U	4.7	1.9	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	0.93 U	4.7	0.93	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	0.93 U	4.7	0.93	ug/kg	
541-73-1	m-Dichlorobenzene	0.93 U	4.7	0.93	ug/kg	
95-50-1	o-Dichlorobenzene	0.93 U	4.7	0.93	ug/kg	
106-46-7	p-Dichlorobenzene	0.93 U	4.7	0.93	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	0.93 U	4.7	0.93	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	0.93 U	4.7	0.93	ug/kg	
100-41-4	Ethylbenzene	0.93 U	4.7	0.93	ug/kg	
74-83-9	Methyl bromide	1.7 U	4.7	1.7	ug/kg	
74-87-3	Methyl chloride	1.9 U	4.7	1.9	ug/kg	
75-09-2	Methylene chloride	4.7 U	9.3	4.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	0.93 U	4.7	0.93	ug/kg	
71-55-6	1,1,1-Trichloroethane	0.93 U	4.7	0.93	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1.2 U	4.7	1.2	ug/kg	
79-00-5	1,1,2-Trichloroethane	0.93 U	4.7	0.93	ug/kg	
127-18-4	Tetrachloroethylene	0.93 U	4.7	0.93	ug/kg	

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSM-SO-DRUM-2	Date Sampled:	05/14/08
Lab Sample ID:	F57525-2	Date Received:	05/15/08
Matrix:	SO - Soil	Percent Solids:	89.4
Method:	SW846 8260B		
Project:	Sigsbee Marina; NAS Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	0.93 U	4.7	0.93	ug/kg	
79-01-6	Trichloroethylene	0.93 U	4.7	0.93	ug/kg	
75-69-4	Trichlorofluoromethane	1.5 U	4.7	1.5	ug/kg	
75-01-4	Vinyl chloride	1.3 U	4.7	1.3	ug/kg	
1330-20-7	Xylene (total)	2.0 U	14	2.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		80-121%
2037-26-5	Toluene-D8	98%		71-130%
460-00-4	4-Bromofluorobenzene	101%		59-148%
17060-07-0	1,2-Dichloroethane-D4	96%		77-123%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID: KWSM-SO-DRUM-4

Lab Sample ID: F57525-4

Date Sampled: 05/14/08

Matrix: SO - Soil

Date Received: 05/15/08

Method: SW846 8260B

Percent Solids: 87.3

Project: Sigsbee Marina; NAS Key West, FL

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G0050466.D	1	05/19/08	SH	n/a	n/a	VG1912
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	13 U	29	13	ug/kg	
107-13-1	Acrylonitrile	9.0 U	29	9.0	ug/kg	
71-43-2	Benzene	1.1 U	5.7	1.1	ug/kg	
75-27-4	Bromodichloromethane	1.1 U	5.7	1.1	ug/kg	
75-25-2	Bromoform	1.1 U	5.7	1.1	ug/kg	
108-90-7	Chlorobenzene	1.1 U	5.7	1.1	ug/kg	
75-00-3	Chloroethane	3.0 U	5.7	3.0	ug/kg	
67-66-3	Chloroform	1.1 U	5.7	1.1	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	5.7 U	29	5.7	ug/kg	
56-23-5	Carbon tetrachloride	1.5 U	5.7	1.5	ug/kg	
75-34-3	1,1-Dichloroethane	1.3 U	5.7	1.3	ug/kg	
75-35-4	1,1-Dichloroethylene	1.1 U	5.7	1.1	ug/kg	
107-06-2	1,2-Dichloroethane	1.1 U	5.7	1.1	ug/kg	
78-87-5	1,2-Dichloropropane	1.5 U	5.7	1.5	ug/kg	
124-48-1	Dibromochloromethane	1.1 U	5.7	1.1	ug/kg	
75-71-8	Dichlorodifluoromethane	2.3 U	5.7	2.3	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	1.1 U	5.7	1.1	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	1.1 U	5.7	1.1	ug/kg	
541-73-1	m-Dichlorobenzene	1.1 U	5.7	1.1	ug/kg	
95-50-1	o-Dichlorobenzene	1.1 U	5.7	1.1	ug/kg	
106-46-7	p-Dichlorobenzene	1.1 U	5.7	1.1	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	1.1 U	5.7	1.1	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	1.1 U	5.7	1.1	ug/kg	
100-41-4	Ethylbenzene	1.1 U	5.7	1.1	ug/kg	
74-83-9	Methyl bromide	2.1 U	5.7	2.1	ug/kg	
74-87-3	Methyl chloride	2.3 U	5.7	2.3	ug/kg	
75-09-2	Methylene chloride	5.7 U	11	5.7	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	1.1 U	5.7	1.1	ug/kg	
71-55-6	1,1,1-Trichloroethane	1.1 U	5.7	1.1	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	1.5 U	5.7	1.5	ug/kg	
79-00-5	1,1,2-Trichloroethane	1.1 U	5.7	1.1	ug/kg	
127-18-4	Tetrachloroethylene	1.1 U	5.7	1.1	ug/kg	

U = Not detected MDL - Method Detection Limit

RL = Reporting Limit = PQL

L = Indicates value exceeds calibration range

I = Result &gt;= MDL but &lt; RL J = Estimated value

V = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID:	KWSM-SO-DRUM-4	Date Sampled:	05/14/08
Lab Sample ID:	F57525-4	Date Received:	05/15/08
Matrix:	SO - Soil	Percent Solids:	87.3
Method:	SW846 8260B		
Project:	Sigsbee Marina; NAS Key West, FL		

## VOA PPL List + MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	1.1 U	5.7	1.1	ug/kg	
79-01-6	Trichloroethylene	1.1 U	5.7	1.1	ug/kg	
75-69-4	Trichlorofluoromethane	1.8 U	5.7	1.8	ug/kg	
75-01-4	Vinyl chloride	1.6 U	5.7	1.6	ug/kg	
1330-20-7	Xylene (total)	2.4 U	17	2.4	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		80-121%
2037-26-5	Toluene-D8	97%		71-130%
460-00-4	4-Bromofluorobenzene	97%		59-148%
17060-07-0	1,2-Dichloroethane-D4	99%		77-123%

U = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit = PQL  
L = Indicates value exceeds calibration range

I = Result >= MDL but < RL    J = Estimated value  
V = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSM-BCTF-GW-DRUM-3			Date Sampled:	05/14/08
Lab Sample ID:	F57525-3			Date Received:	05/15/08
Matrix:	AQ - Ground Water			Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C				
Project:	Sigsbee Marina; NAS Key West, FL				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W040641.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.95	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.95	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.95	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.095 U	0.19	0.095	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.095 U	0.19	0.095	ug/l	
207-08-9	Benzo(k)fluoranthene	0.095 U	0.19	0.095	ug/l	
218-01-9	Chrysene	0.095 U	0.19	0.095	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.95	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.95	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	5.2	0.95	0.24	ug/l	
91-57-6	2-Methylnaphthalene	3.5	0.95	0.24	ug/l	
91-20-3	Naphthalene	3.9	0.95	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.95	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.95	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	64%		42-108%
321-60-8	2-Fluorobiphenyl	64%		40-106%
1718-51-0	Terphenyl-d14	71%		39-121%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSM-GW-DRUM-1	Date Sampled:	05/14/08
Lab Sample ID:	F57525-1	Date Received:	05/15/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C BY SIM SW846 3510C		
Project:	Sigsbee Marina; NAS Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W040640.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1040 ml	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.48 U	0.96	0.48	ug/l	
208-96-8	Acenaphthylene	0.48 U	0.96	0.48	ug/l	
120-12-7	Anthracene	0.48 U	0.96	0.48	ug/l	
56-55-3	Benzo(a)anthracene	0.048 U	0.19	0.048	ug/l	
50-32-8	Benzo(a)pyrene	0.096 U	0.19	0.096	ug/l	
205-99-2	Benzo(b)fluoranthene	0.048 U	0.19	0.048	ug/l	
191-24-2	Benzo(g,h,i)perylene	0.096 U	0.19	0.096	ug/l	
207-08-9	Benzo(k)fluoranthene	0.096 U	0.19	0.096	ug/l	
218-01-9	Chrysene	0.096 U	0.19	0.096	ug/l	
53-70-3	Dibenzo(a,h)anthracene	0.048 U	0.19	0.048	ug/l	
206-44-0	Fluoranthene	0.24 U	0.96	0.24	ug/l	
86-73-7	Fluorene	0.24 U	0.96	0.24	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	0.048 U	0.19	0.048	ug/l	
90-12-0	1-Methylnaphthalene	0.89	0.96	0.24	ug/l	I
91-57-6	2-Methylnaphthalene	1.4	0.96	0.24	ug/l	
91-20-3	Naphthalene	2.3	0.96	0.24	ug/l	
85-01-8	Phenanthrene	0.48 U	0.96	0.48	ug/l	
129-00-0	Pyrene	0.24 U	0.96	0.24	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	54%		42-108%
321-60-8	2-Fluorobiphenyl	46%		40-106%
1718-51-0	Terphenyl-d14	60%		39-121%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result >= MDL but < RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

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## Report of Analysis

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Client Sample ID:	KWSM-SO-DRUM-2			Date Sampled:	05/14/08
Lab Sample ID:	F57525-2			Date Received:	05/15/08
Matrix:	SO - Soil			Percent Solids:	89.4
Method:	SW846 8270C BY SIM SW846 3550B				
Project:	Sigsbee Marina; NAS Key West, FL				

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13873.D	4	05/23/08	RB	05/22/08	OP25149	SR643
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	74 U	300	74	ug/kg	
208-96-8	Acenaphthylene	74 U	300	74	ug/kg	
120-12-7	Anthracene	44 U	300	44	ug/kg	
56-55-3	Benzo(a)anthracene	15 U	59	15	ug/kg	
50-32-8	Benzo(a)pyrene	15 U	59	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	24.8	59	15	ug/kg	I
191-24-2	Benzo(g,h,i)perylene	16.6	59	15	ug/kg	I
207-08-9	Benzo(k)fluoranthene	15 U	59	15	ug/kg	
218-01-9	Chrysene	15 U	59	15	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	15 U	59	15	ug/kg	
206-44-0	Fluoranthene	52 U	300	52	ug/kg	
86-73-7	Fluorene	44 U	300	44	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	15 U	59	15	ug/kg	
90-12-0	1-Methylnaphthalene	44 U	300	44	ug/kg	
91-57-6	2-Methylnaphthalene	44 U	300	44	ug/kg	
91-20-3	Naphthalene	44 U	300	44	ug/kg	
85-01-8	Phenanthrene	44 U	300	44	ug/kg	
129-00-0	Pyrene	52 U	300	52	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		40-105%
321-60-8	2-Fluorobiphenyl	71%		43-107%
1718-51-0	Terphenyl-d14	89%		45-119%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



Accutest Laboratories

## Report of Analysis

Page 1 of 1

3.4

3

Client Sample ID: KWSM-SO-DRUM-4

Lab Sample ID: F57525-4

Date Sampled: 05/14/08

Matrix: SO - Soil

Date Received: 05/15/08

Method: SW846 8270C BY SIM SW846 3550B

Percent Solids: 87.3

Project: Sigsbee Marina; NAS Key West, FL

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	R13889.D	4	05/26/08	RB	05/22/08	OP25149	SR644
Run #2							

	Initial Weight	Final Volume
Run #1	29.7 g	1.0 ml
Run #2		

## BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	77 U	310	77	ug/kg	
208-96-8	Acenaphthylene	77 U	310	77	ug/kg	
120-12-7	Anthracene	46 U	310	46	ug/kg	
56-55-3	Benzo(a)anthracene	15 U	62	15	ug/kg	
50-32-8	Benzo(a)pyrene	15 U	62	15	ug/kg	
205-99-2	Benzo(b)fluoranthene	15 U	62	15	ug/kg	
191-24-2	Benzo(g,h,i)perylene	15 U	62	15	ug/kg	
207-08-9	Benzo(k)fluoranthene	15 U	62	15	ug/kg	
218-01-9	Chrysene	15 U	62	15	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	15 U	62	15	ug/kg	
206-44-0	Fluoranthene	54 U	310	54	ug/kg	
86-73-7	Fluorene	46 U	310	46	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	15 U	62	15	ug/kg	
90-12-0	1-Methylnaphthalene	46 U	310	46	ug/kg	
91-57-6	2-Methylnaphthalene	46 U	310	46	ug/kg	
91-20-3	Naphthalene	46 U	310	46	ug/kg	
85-01-8	Phenanthrene	46 U	310	46	ug/kg	
129-00-0	Pyrene	54 U	310	54	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		40-105%
321-60-8	2-Fluorobiphenyl	83%		43-107%
1718-51-0	Terphenyl-d14	84%		45-119%

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID: KWSM-BCTF-GW-DRUM-3  
 Lab Sample ID: F57525-3  
 Matrix: AQ - Ground Water  
 Method: FLORIDA-PRO SW846 3510C  
 Project: Sigsbee Marina; NAS Key West, FL

Date Sampled: 05/14/08  
 Date Received: 05/15/08  
 Percent Solids: n/a

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47396.D	1	05/20/08	JB	05/19/08	OP25103	GIJ1781
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.820	0.24	0.16	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	102%		38-122%		

U = Not detected MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

Page 1 of 1

Client Sample ID:	KWSM-GW-DRUM-1	Date Sampled:	05/14/08
Lab Sample ID:	F57525-1	Date Received:	05/15/08
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	FLORIDA-PRO SW846 3510C		
Project:	Sigsbee Marina; NAS Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47393.D	1	05/20/08	JB	05/19/08	OP25103	GJ1781
Run #2							

	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	0.389	0.24	0.16	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	104%		38-122%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

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Client Sample ID:	KWSM-SO-DRUM-2	Date Sampled:	05/14/08
Lab Sample ID:	F57525-2	Date Received:	05/15/08
Matrix:	SO - Soil	Percent Solids:	89.4
Method:	FLORIDA-PRO SW846 3550B		
Project:	Sigsbee Marina; NAS Key West, FL		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47409.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	14.4	9.3	6.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		47-111%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

## Report of Analysis

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3

Client Sample ID:	KWSM-SO-DRUM-4	Date Sampled:	05/14/08
Lab Sample ID:	F57525-4	Date Received:	05/15/08
Matrix:	SO - Soil	Percent Solids:	87.3
Method:	FLORIDA-PRO SW846 3550B		
Project:	Sigsbee Marina; NAS Key West, FL		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	IJ47410.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	13.8	9.5	6.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		47-111%

U = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit = PQL  
 L = Indicates value exceeds calibration range

I = Result  $\geq$  MDL but  $<$  RL    J = Estimated value  
 V = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

**APPENDIX C**

**SUPPORT DOCUMENTATION**

## SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Tetra Tech NUS

Job No: F57525

Site: Sigsbee Marina; NAS Key West, FL

Report Date: 5/30/2008 5:19:07 PM

4 Samples were collected on 05/14/2008 and were received at Accutest on 05/15/2008 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of F57525. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS by Method SW846 8260B

Matrix: AQ

Batch ID: VJ2475

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57610-7MS, F57610-7MSD were used as the QC samples indicated.

Matrix Spike Recoverys for 2-Chloroethyl vinyl ether, Trichloroethylene are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recovery for 2-Chloroethyl vinyl ether is outside control limits. Probable cause: due to matrix interference.

Matrix: SO

Batch ID: VG1912

All samples were analyzed within the recommended method holding time.

Samples F57493-14MS, F57493-14MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery for 2-Chloroethyl vinyl ether is outside control limits.

Matrix Spike Recoverys for Acrolein, Bromoform are outside control limits. Probable cause: due to matrix interference.

Matrix Spike Duplicate Recoverys for Acrolein, Bromoform, trans-1,3-Dichloropropene are outside control limits. Probable cause: due to matrix interference.

RPD for MSD for Acrolein is outside control limits for sample F57493-14MSD. Probable cause due to sample non-homogeneity.

### Extractables by GCMS by Method SW846 8270C BY SIM

Matrix: AQ

Batch ID: OP25106

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F57485-3MS, F57485-3MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recoverys for 2-Methylnaphthalene, Anthracene, Phenanthrene are outside control limits. Probable cause: due to matrix interference.

Matrix: SO

Batch ID: OP25149

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Samples F57653-4MS, F57653-4MSD were used as the QC samples indicated.

OP25149-MB for Nitrobenzene-d5, 2-Fluorobiphenyl, Terphenyl-d14: Surrogate recoveries corrected for actual spike amount.

Friday, May 30, 2008

## Extractables by GC by Method FLORIDA-PRO

Matrix: AQ

Batch ID: OP25103

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F57525-1MS, F57525-1MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery for TPH (C8-C40) is outside control limits. Probable cause: due to matrix interference.

Matrix: SO

Batch ID: OP25098

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

Samples F57546-2MS, F57546-2MSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

## Wet Chemistry by Method SM19 2540B M

Matrix: SO

Batch ID: GN30420

Sample F57520-1DUP was used as the QC sample for Solids, Percent.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

Ellen Pampel, Inorganic QA (signature on file)

Date: May 30, 2008

Friday, May 30, 2008



# HOLDTIME

SDG F57525

SORT	UNITS	NSAMPLE	LAB ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP EXTR	EXTR ANL	SMP_ANL
PCS	%	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/15/2008	5/15/2008	1	0	1
PCS	%	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/15/2008	5/15/2008	1	0	1
OS	%	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
OS	%	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/22/2008	5/23/2008	8	1	9
OS	%	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/22/2008	5/26/2008	8	4	12
OS	%	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
OS	UG/KG	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/22/2008	5/23/2008	8	1	9
OS	UG/KG	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/22/2008	5/26/2008	8	4	12
OS	UG/L	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
OS	UG/L	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
OV	%	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/19/2008	5/19/2008	5	0	5
OV	%	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/28/2008	5/28/2008	14	0	14
OV	%	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/28/2008	5/28/2008	14	0	14
OV	%	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/19/2008	5/19/2008	5	0	5
OV	UG/KG	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/19/2008	5/19/2008	5	0	5

SORT	UNITS	NSAMPLE	LAB ID	QC TYPE	SAMP DATE	EXTR DATE	ANAL DATE	SMP EXTR	EXTR ANL	SMP ANL
OV	UG/KG	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/19/2008	5/19/2008	5	0	5
OV	UG/L	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/28/2008	5/28/2008	14	0	14
OV	UG/L	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/28/2008	5/28/2008	14	0	14
TPH	%	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
TPH	%	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
TPH	%	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/16/2008	5/21/2008	2	5	7
TPH	%	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/16/2008	5/21/2008	2	5	7
TPH	MG/KG	KWSM-SO-DRUM-2	F57525-2	NM	5/14/2008	5/16/2008	5/21/2008	2	5	7
TPH	MG/KG	KWSM-SO-DRUM-4	F57525-4	NM	5/14/2008	5/16/2008	5/21/2008	2	5	7
TPH	MG/L	KWSM-GW-DRUM-1	F57525-1	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6
TPH	MG/L	KWSM-BCTF-GW-DRUM-	F57525-3	NM	5/14/2008	5/19/2008	5/20/2008	5	1	6

## Sample Summary

Tetra Tech NUS

Sigsbee Marina; NAS Key West, FL  
Project No: CTO-0095

Job No: F57525

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
F57525-1	05/14/08	10:30 GB	05/15/08	AQ Ground Water	KWSM-GW-DRUM-1
F57525-2	05/14/08	10:15 GB	05/15/08	SO Soil	KWSM-SO-DRUM-2
F57525-3	05/14/08	10:45 GB	05/15/08	AQ Ground Water	KWSM-BCTF-GW-DRUM-3
F57525-4	05/14/08	11:00 GB	05/15/08	SO Soil	KWSM-SO-DRUM-4

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

26309


**ACCUTEST.****Accutest Laboratories Southeast**

## Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, FL 32811  
TEL. 407-425-6700 • FAX: 407-425-0707

Accutest JOB #

#FS7525

PAGE OF

Accutest Quote #	Customer Name	Product	Quantity	Unit Price	Total Price	Notes
123456	ABC Corp	Product X	100	1.50	150.00	
123457	DEF Inc	Product Y	50	2.00	100.00	
123458	GHI Ltd	Product Z	25	3.00	75.00	
123459	JKL Co	Product A	150	1.00	150.00	
123460	MNO Corp	Product B	75	2.50	187.50	
123461	PQR Inc	Product C	30	4.00	120.00	
123462	STU Ltd	Product D	120	1.25	150.00	
123463	VWX Co	Product E	60	3.50	210.00	
123464	YZA Corp	Product F	40	4.50	180.00	
123465	BCD Inc	Product G	20	5.00	100.00	
123466	EFG Ltd	Product H	100	1.75	175.00	
123467	HIJ Co	Product I	50	3.00	150.00	
123468	KLM Corp	Product J	30	4.00	120.00	
123469	NOP Inc	Product K	150	1.00	150.00	
123470	QRS Ltd	Product L	75	2.50	187.50	
123471	TUV Co	Product M	40	4.50	180.00	
123472	WXY Corp	Product N	20	5.00	100.00	
123473	ZAB Inc	Product O	100	1.75	175.00	
123474	ACD Ltd	Product P	50	3.00	150.00	
123475	EFG Co	Product Q	30	4.00	120.00	
123476	HIJ Corp	Product R	150	1.00	150.00	
123477	KLM Inc	Product S	75	2.50	187.50	
123478	NOP Ltd	Product T	40	4.50	180.00	
123479	QRS Co	Product U	20	5.00	100.00	
123480	STU Corp	Product V	100	1.75	175.00	
123481	VWX Inc	Product W	50	3.00	150.00	
123482	YZA Ltd	Product X	30	4.00	120.00	
123483	BCD Co	Product Y	150	1.00	150.00	
123484	EFG Corp	Product Z	75	2.50	187.50	
123485	HIJ Inc	Product A	40	4.50	180.00	
123486	KLM Ltd	Product B	20	5.00	100.00	
123487	NOP Co	Product C	100	1.75	175.00	
123488	QRS Corp	Product D	50	3.00	150.00	
123489	STU Inc	Product E	30	4.00	120.00	
123490	VWX Ltd	Product F	150	1.00	150.00	
123491	YZA Co	Product G	75	2.50	187.50	
123492	BCD Corp	Product H	40	4.50	180.00	
123493	EFG Inc	Product I	20	5.00	100.00	
123494	HIJ Ltd	Product J	100	1.75	175.00	
123495	KLM Co	Product K	50	3.00	150.00	
123496	NOP Corp	Product L	30	4.00	120.00	
123497	QRS Inc	Product M	150	1.00	150.00	
123498	STU Ltd	Product N	75	2.50	187.50	
123499	VWX Co	Product O	40	4.50	180.00	
123500	YZA Corp	Product P	20	5.00	100.00	

SKIFF#

Client / Reporting Information				Project Information				Analytical Information												Matrix Codes
<b>Company Name</b> TETRA TECH NUS				<b>Project Name</b> SIGSBEE MARINA																
<b>Address</b>				<b>Street</b>																
<b>City</b>				<b>State</b>																
<b>Project Contact</b> CHUCK BRAMAN				<b>E-mail</b>																
<b>Phone #</b> (803) 640-6714				<b>Fax #</b>																
<b>Sampler(s) Name(s)</b> GARY BRAGANZA				<b>Client Purchase Order #</b>																
Accutest Sample #		Field ID / Point of Collection		COLLECTION		CONTAINER INFORMATION												LAB USE ONLY		
				DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	OTHER	NONE	HQ3	PAC3	HVOC3	VOC3A	HACH/MNAC	TO WATER	MICH			
1		KWSM-GW-DRUM-1	5/14/2000	4:30	GW										X	X	X			
2		KWSM-SO-DRUM-2	10:15		SO										X	X	X			
3		KWI-BCTF-GW-DRUM-3	10:45		GW										X	X				
4		KWSM-SO DRUM 4	✓ 11:00		✓ SO										X	X	X			
<b>TURNAROUND TIME (Business Days)</b>																				
<b>Approved By: / Rush Service</b> <input checked="" type="checkbox"/> 10 Days Standard <input type="checkbox"/> 7 Day RUSH <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> OTHER _____ <small>Emergency or Rush T/A Data Available VIA Email or Lablink</small>				<b>Data Deliverable Information</b> <input type="checkbox"/> COMMERCIAL "A" (RESULTS ONLY) <input type="checkbox"/> COMMERCIAL "B" (RESULTS PLUS QC) <input type="checkbox"/> REDT1 (EPA LEVEL 3) <input type="checkbox"/> FULT1 (EPA LEVEL 4) <input type="checkbox"/> EDD'S												<b>Comments / Remarks</b>				
Relinquished by Sampler: [Signature] Date Time: 5/14/00 Received By: FEDEX Relinquished by: FEDEX Date Time: Received By: Received By: 0900 Relinquished by: [Signature] Date Time: Received By: Relinquished by: Relinquished by: Date Time: Received By: Relinquished by: Relinquished by: Relinquished by: Relinquished by: Date Time: Received By:																				
<b>Lab Use Only:</b> Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 2.0																				

#### 4.1

## F57525: Chain of Custody

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**ACCUTEST.**  
F57525 Laboratories

# ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: F57525 CLIENT: Tetra Tech PROJECT: Sigsbee Marina  
 DATE/TIME RECEIVED: 05-15-08 0900 # OF COOLERS RECEIVED: 1 COOLER TEMPS: 2.0  
 METHOD OF DELIVERY: FEDEX UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER  
 AIRBILL NUMBERS: 8651 5823 8740

## COOLER INFORMATION

- ☐ CUSTODY SEAL NOT PRESENT OR NOT INTACT
- ☐ CHAIN OF CUSTODY NOT RECEIVED (COC)
- ☐ ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- ☐ SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- ☐ TEMPERATURE CRITERIA NOT MET
- ☒ WET ICE RECEIVED IN COOLER

## TRIP BLANK INFORMATION

- ☒ TRIP BLANK PROVIDED
- ☐ TRIP BLANK NOT PROVIDED
- ☒ TRIP BLANK NOT ON COC
- ☒ TRIP BLANK INTACT
- ☐ TRIP BLANK NOT INTACT
- ☒ RECEIVED WATER TRIP BLANK
- ☒ RECEIVED SOIL TRIP BLANK

## MISC. INFORMATION

NUMBER OF ENCORES ? 0  
 NUMBER OF 5035 FIELD KITS ? 2 + TB  
 NUMBER OF LAB FILTERED METALS ? 0

SUMMARY OF COMMENTS: 11

## SAMPLE INFORMATION

- ☐ SAMPLE LABELS NOT PRESENT ON ALL BOTTLES
- ☐ CORRECT NUMBER OF CONTAINERS USED
- ☐ SAMPLE RECEIVED IMPROPERLY PRESERVED
- ☐ INSUFFICIENT VOLUME FOR ANALYSIS
- ☐ TIMES ON COC DOES NOT MATCH LABEL(S)
- ☐ ID'S ON COC DOES NOT MATCH LABEL(S)
- ☐ VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- ☐ BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- ☐ NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- ☐ UNCLEAR FILTERING INSTRUCTIONS
- ☐ UNCLEAR COMPOSITING INSTRUCTIONS
- ☐ SAMPLE CONTAINER(S) RECEIVED BROKEN
- ☐ % SOLIDS JAR NOT RECEIVED
- ☐ 5035 FIELD KIT NOT FROZEN WITHIN 48 HOURS
- ☐ RESIDUAL CHLORINE PRESENT

( APPLICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS)

TECHNICIAN SIGNATURE/DATE F.M. 05-15-08 TECHNICIAN SIGNATURE/DATE dc 5-15-08 ASBD 12/17/07

4.1  
4

F57525: Chain of Custody  
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## Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F57525-1	J038630.D	100.0	101.0	105.0	102.0
F57525-3	J038631.D	95.0	99.0	110.0	109.0
F57610-7MS	J038636.D	97.0	104.0	101.0	99.0
F57610-7MSD	J038637.D	98.0	102.0	101.0	98.0
VJ2475-BS	J038628.D	101.0	102.0	100.0	100.0
VJ2475-MB	J038629.D	98.0	99.0	109.0	111.0

Surrogate Compounds	Recovery Limits
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S1 = Dibromofluoromethane	87-116%
S2 = 1,2-Dichloroethane-D4	76-127%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	84-120%

5.6  
5

# Volatile Surrogate Recovery Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: SW846 8260B

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F57525-2	G0050465.D	96.0	98.0	101.0	96.0
F57525-4	G0050466.D	102.0	97.0	97.0	99.0
F57493-14MS	G0050468.D	92.0	103.0	97.0	92.0
F57493-14MSD	G0050469.D	98.0	97.0	98.0	91.0
VG1912-BS	G0050453.D	102.0	96.0	98.0	109.0
VG1912-MB	G0050454.D	100.0	92.0	96.0	101.0

Surrogate Compounds	Recovery Limits
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S1 = Dibromofluoromethane	80-121%
S2 = Toluene-D8	71-130%
S3 = 4-Bromofluorobenzene	59-148%
S4 = 1,2-Dichloroethane-D4	77-123%

5.6  
5

## Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57493-14MS	G0050468.D 1		05/19/08	SH	n/a	n/a	VG1912
F57493-14MSD	G0050469.D 1		05/19/08	SH	n/a	n/a	VG1912
F57493-14	G0050462.D 1		05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	F57493-14 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	ND		291	ND	0*	24.8	9*	200*	27-156/39
107-13-1	Acrylonitrile	ND		291	172	59	166	59	4	55-144/24
71-43-2	Benzene	ND		58.2	57.8	99	57.6	103	0	78-130/25
75-27-4	Bromodichloromethane	ND		58.2	47.6	82	49.5	89	4	73-122/25
75-25-2	Bromoform	ND		58.2	37.8	65*	36.0	64*	5	70-139/26
108-90-7	Chlorobenzene	ND		58.2	61.4	105	57.9	104	6	83-122/23
75-00-3	Chloroethane	ND		58.2	67.9	117	68.1	122	0	61-153/31
67-66-3	Chloroform	ND		58.2	55.8	96	56.6	101	1	79-129/27
110-75-8	2-Chloroethyl vinyl ether	ND		291	311	107	310	111	0	52-142/25
56-23-5	Carbon tetrachloride	ND		58.2	56.0	96	56.4	101	1	79-135/29
75-34-3	1,1-Dichloroethane	ND		58.2	55.4	95	57.8	103	4	77-132/26
75-35-4	1,1-Dichloroethylene	0.98	J	58.2	58.9	99	58.7	103	0	66-132/27
107-06-2	1,2-Dichloroethane	ND		58.2	45.9	79	47.9	86	4	78-129/24
78-87-5	1,2-Dichloropropane	ND		58.2	51.1	88	51.2	92	0	74-127/27
124-48-1	Dibromochloromethane	ND		58.2	50.4	87	48.0	86	5	78-117/27
75-71-8	Dichlorodifluoromethane	ND		58.2	23.2	40	24.5	44	5	35-162/30
156-59-2	cis-1,2-Dichloroethylene	ND		58.2	50.6	87	53.2	95	5	74-123/26
10061-01-5	cis-1,3-Dichloropropene	ND		58.2	48.4	83	48.1	86	1	79-130/23
541-73-1	m-Dichlorobenzene	ND		58.2	59.3	102	60.0	107	1	82-126/29
95-50-1	o-Dichlorobenzene	ND		58.2	55.5	95	57.3	102	3	83-123/28
106-46-7	p-Dichlorobenzene	ND		58.2	60.2	103	62.3	111	3	84-124/28
156-60-5	trans-1,2-Dichloroethylene	ND		58.2	57.0	98	58.6	105	3	77-129/27
10061-02-6	trans-1,3-Dichloropropene	ND		58.2	50.7	87	48.3	86*	5	87-131/27
100-41-4	Ethylbenzene	ND		58.2	63.4	109	59.7	107	6	82-124/25
74-83-9	Methyl bromide	ND		58.2	58.9	101	61.7	110	5	60-146/31
74-87-3	Methyl chloride	ND		58.2	36.2	62	37.3	67	3	58-163/26
75-09-2	Methylene chloride	18.9	B	58.2	55.6	63	58.7	71	5	62-140/25
1634-04-4	Methyl Tert Butyl Ether	ND		58.2	44.5	76	43.7	78	2	70-131/25
71-55-6	1,1,1-Trichloroethane	ND		58.2	59.2	102	59.3	106	0	80-133/27
79-34-5	1,1,2,2-Tetrachloroethane	ND		58.2	46.2	79	46.8	84	1	70-128/30
79-00-5	1,1,2-Trichloroethane	ND		58.2	49.0	84	46.3	83	6	76-118/28
127-18-4	Tetrachloroethylene	ND		58.2	65.1	112	62.2	111	5	79-132/27
108-88-3	Toluene	ND		58.2	60.5	104	57.6	103	5	80-123/26
79-01-6	Trichloroethylene	ND		58.2	55.0	94	57.3	102	4	78-132/28
75-69-4	Trichlorofluoromethane	ND		58.2	65.0	112	66.6	119	2	67-149/29
75-01-4	Vinyl chloride	ND		58.2	45.1	77	42.4	76	6	60-145/29



# Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57493-14MS	G0050468.D	1	05/19/08	SH	n/a	n/a	VG1912
F57493-14MSD	G0050469.D	1	05/19/08	SH	n/a	n/a	VG1912
F57493-14	G0050462.D	1	05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	F57493-14 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	ND		175	187	107	178	106	5	83-127/24

CAS No.	Surrogate Recoveries	MS	MSD	F57493-14	Limits
1868-53-7	Dibromofluoromethane	92%	98%	99%	80-121%
2037-26-5	Toluene-D8	103%	97%	93%	71-130%
460-00-4	4-Bromofluorobenzene	97%	98%	97%	59-148%
17060-07-0	1,2-Dichloroethane-D4	92%	91%	97%	77-123%

## Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57610-7MS	J038636.D	20	05/28/08	JG	n/a	n/a	VJ2475
F57610-7MSD	J038637.D	20	05/28/08	JG	n/a	n/a	VJ2475
F57610-7	J038634.D	20	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	F57610-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-02-8	Acrolein	ND		2500	984	39	1000	40	2	33-157/21
107-13-1	Acrylonitrile	ND		2500	2430	97	2320	93	5	62-124/13
71-43-2	Benzene	ND		500	502	100	494	99	2	83-124/11
75-27-4	Bromodichloromethane	ND		500	461	92	453	91	2	76-116/10
75-25-2	Bromoform	ND		500	493	99	453	91	8	68-128/11
108-90-7	Chlorobenzene	ND		500	493	99	479	96	3	87-115/9
75-00-3	Chloroethane	ND		500	467	93	491	98	5	54-166/20
67-66-3	Chloroform	ND		500	502	100	480	96	4	85-123/10
110-75-8	2-Chloroethyl vinyl ether	ND		2500	489	20*	392	16*	22	63-125/24
56-23-5	Carbon tetrachloride	ND		500	526	105	522	104	1	74-139/13
75-34-3	1,1-Dichloroethane	ND		500	517	103	505	101	2	82-127/10
75-35-4	1,1-Dichloroethylene	39.2		500	551	102	547	102	1	75-133/13
107-06-2	1,2-Dichloroethane	ND		500	482	96	465	93	4	76-122/11
78-87-5	1,2-Dichloropropane	ND		500	482	96	467	93	3	81-120/11
124-48-1	Dibromochloromethane	ND		500	472	94	450	90	5	74-116/11
75-71-8	Dichlorodifluoromethane	ND		500	325	65	375	75	14	34-158/22
156-59-2	cis-1,2-Dichloroethylene	6.7	J	500	478	94	468	92	2	81-114/10
10061-01-5	cis-1,3-Dichloropropene	ND		500	480	96	463	93	4	83-119/10
541-73-1	m-Dichlorobenzene	ND		500	486	97	466	93	4	86-115/9
95-50-1	o-Dichlorobenzene	ND		500	479	96	463	93	3	85-115/9
106-46-7	p-Dichlorobenzene	ND		500	480	96	469	94	2	87-113/10
156-60-5	trans-1,2-Dichloroethylene	ND		500	490	98	480	96	2	82-126/10
10061-02-6	trans-1,3-Dichloropropene	ND		500	525	105	498	100	5	87-123/10
100-41-4	Ethylbenzene	ND		500	526	105	502	100	5	87-118/10
74-83-9	Methyl bromide	ND		500	459	92	495	99	8	55-151/21
74-87-3	Methyl chloride	ND		500	455	91	482	96	6	55-173/22
75-09-2	Methylene chloride	ND		500	415	83	422	84	2	69-125/11
1634-04-4	Methyl Tert Butyl Ether	ND		500	426	85	416	83	2	75-116/10
71-55-6	1,1,1-Trichloroethane	9.6	J	500	523	103	501	98	4	79-133/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		500	468	94	456	91	3	71-120/11
79-00-5	1,1,2-Trichloroethane	ND		500	492	98	464	93	6	80-114/11
127-18-4	Tetrachloroethylene	ND		500	505	101	479	96	5	80-131/12
108-88-3	Toluene	ND		500	530	106	503	101	5	86-116/10
79-01-6	Trichloroethylene	823		500	1460	127*	1410	117	3	85-124/10
75-69-4	Trichlorofluoromethane	ND		500	488	98	437	87	11	66-156/15
75-01-4	Vinyl chloride	ND		500	446	89	474	95	6	57-153/22

# Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F57610-7MS	J038636.D	20	05/28/08	JG	n/a	n/a	VJ2475
F57610-7MSD	J038637.D	20	05/28/08	JG	n/a	n/a	VJ2475
F57610-7	J038634.D	20	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	F57610-7 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
1330-20-7	Xylene (total)	ND	1500	1660	111	1590	106	4	86-120/10

CAS No.	Surrogate Recoveries	MS	MSD	F57610-7	Limits
1868-53-7	Dibromofluoromethane	97%	98%	100%	87-116%
17060-07-0	1,2-Dichloroethane-D4	104%	102%	99%	76-127%
2037-26-5	Toluene-D8	101%	101%	107%	86-112%
460-00-4	4-Bromofluorobenzene	99%	98%	111%	84-120%

## Blank Spike Summary

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG1912-BS	G0050453.D	1	05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
107-02-8	Acrolein	250	92.5	37	27-156
107-13-1	Acrylonitrile	250	254	102	55-144
71-43-2	Benzene	50	53.7	107	78-130
75-27-4	Bromodichloromethane	50	47.4	95	73-122
75-25-2	Bromoform	50	42.6	85	70-139
108-90-7	Chlorobenzene	50	54.5	109	83-122
75-00-3	Chloroethane	50	62.4	125	61-153
67-66-3	Chloroform	50	52.2	104	79-129
110-75-8	2-Chloroethyl vinyl ether	250	362	145*	52-142
56-23-5	Carbon tetrachloride	50	53.2	106	79-135
75-34-3	1,1-Dichloroethane	50	54.0	108	77-132
75-35-4	1,1-Dichloroethylene	50	55.9	112	66-132
107-06-2	1,2-Dichloroethane	50	50.1	100	78-129
78-87-5	1,2-Dichloropropane	50	48.8	98	74-127
124-48-1	Dibromochloromethane	50	49.7	99	78-117
75-71-8	Dichlorodifluoromethane	50	21.1	42	35-162
156-59-2	cis-1,2-Dichloroethylene	50	49.2	98	74-123
10061-01-5	cis-1,3-Dichloropropene	50	51.5	103	79-130
541-73-1	m-Dichlorobenzene	50	54.6	109	82-126
95-50-1	o-Dichlorobenzene	50	53.1	106	83-123
106-46-7	p-Dichlorobenzene	50	55.1	110	84-124
156-60-5	trans-1,2-Dichloroethylene	50	53.8	108	77-129
10061-02-6	trans-1,3-Dichloropropene	50	49.3	99	87-131
100-41-4	Ethylbenzene	50	55.8	112	82-124
74-83-9	Methyl bromide	50	45.0	90	60-146
74-87-3	Methyl chloride	50	36.2	72	58-163
75-09-2	Methylene chloride	50	50.5	101	62-140
1634-04-4	Methyl Tert Butyl Ether	50	48.1	96	70-131
71-55-6	1,1,1-Trichloroethane	50	56.7	113	80-133
79-34-5	1,1,2,2-Tetrachloroethane	50	50.6	101	70-128
79-00-5	1,1,2-Trichloroethane	50	46.8	94	76-118
127-18-4	Tetrachloroethylene	50	54.4	109	79-132
108-88-3	Toluene	50	52.4	105	80-123
79-01-6	Trichloroethylene	50	51.9	104	78-132
75-69-4	Trichlorofluoromethane	50	61.1	122	67-149
75-01-4	Vinyl chloride	50	40.3	81	60-145

## Blank Spike Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG1912-BS	G0050453.D	1	05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
1330-20-7	Xylene (total)	150	165	110	83-127

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	80-121%
2037-26-5	Toluene-D8	96%	71-130%
460-00-4	4-Bromofluorobenzene	98%	59-148%
17060-07-0	1,2-Dichloroethane-D4	109%	77-123%

**Blank Spike Summary**

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2475-BS	J038628.D	1	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
107-02-8	Acrolein	125	54.8	44	33-157
107-13-1	Acrylonitrile	125	136	109	62-124
71-43-2	Benzene	25	25.9	104	83-124
75-27-4	Bromodichloromethane	25	24.4	98	76-116
75-25-2	Bromoform	25	25.1	100	68-128
108-90-7	Chlorobenzene	25	25.4	102	87-115
75-00-3	Chloroethane	25	28.2	113	54-166
67-66-3	Chloroform	25	25.8	103	85-123
110-75-8	2-Chloroethyl vinyl ether	125	106	85	63-125
56-23-5	Carbon tetrachloride	25	28.8	115	74-139
75-34-3	1,1-Dichloroethane	25	26.7	107	82-127
75-35-4	1,1-Dichloroethylene	25	27.3	109	75-133
107-06-2	1,2-Dichloroethane	25	23.9	96	76-122
78-87-5	1,2-Dichloropropane	25	25.3	101	81-120
124-48-1	Dibromochloromethane	25	24.4	98	74-116
75-71-8	Dichlorodifluoromethane	25	21.2	85	34-158
156-59-2	cis-1,2-Dichloroethylene	25	25.5	102	81-114
10061-01-5	cis-1,3-Dichloropropene	25	25.9	104	83-119
541-73-1	m-Dichlorobenzene	25	25.4	102	86-115
95-50-1	o-Dichlorobenzene	25	25.1	100	85-115
106-46-7	p-Dichlorobenzene	25	25.3	101	87-113
156-60-5	trans-1,2-Dichloroethylene	25	26.5	106	82-126
10061-02-6	trans-1,3-Dichloropropene	25	26.6	106	87-123
100-41-4	Ethylbenzene	25	26.6	106	87-118
74-83-9	Methyl bromide	25	28.3	113	55-151
74-87-3	Methyl chloride	25	25.5	102	55-173
75-09-2	Methylene chloride	25	21.4	86	69-125
1634-04-4	Methyl Tert Butyl Ether	25	22.9	92	75-116
71-55-6	1,1,1-Trichloroethane	25	27.5	110	79-133
79-34-5	1,1,2,2-Tetrachloroethane	25	23.9	96	71-120
79-00-5	1,1,2-Trichloroethane	25	23.9	96	80-114
127-18-4	Tetrachloroethylene	25	26.2	105	80-131
108-88-3	Toluene	25	26.2	105	86-116
79-01-6	Trichloroethylene	25	25.7	103	85-124
75-69-4	Trichlorofluoromethane	25	30.5	122	66-156
75-01-4	Vinyl chloride	25	27.0	108	57-153

## Blank Spike Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2475-BS	J038628.D	1	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
1330-20-7	Xylene (total)	75	84.2	112	86-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	87-116%
17060-07-0	1,2-Dichloroethane-D4	102%	76-127%
2037-26-5	Toluene-D8	100%	86-112%
460-00-4	4-Bromofluorobenzene	100%	84-120%

## Method Blank Summary

Page 1 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG1912-MB	G0050454.D	1	05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	25	11	ug/kg	
107-13-1	Acrylonitrile	ND	25	7.9	ug/kg	
71-43-2	Benzene	ND	5.0	1.0	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.0	ug/kg	
75-00-3	Chloroethane	ND	5.0	2.6	ug/kg	
67-66-3	Chloroform	ND	5.0	1.0	ug/kg	
110-75-8	2-Chloroethyl vinyl ether	ND	25	5.0	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.3	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.1	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.0	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.3	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	2.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.0	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.0	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.0	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.0	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.0	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.8	ug/kg	
74-87-3	Methyl chloride	ND	5.0	2.0	ug/kg	
75-09-2	Methylene chloride	7.0	10	5.0	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.0	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	1.0	ug/kg	
108-88-3	Toluene	ND	5.0	1.0	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.6	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.4	ug/kg	



## Method Blank Summary

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Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VG1912-MB	G0050454.D	1	05/19/08	SH	n/a	n/a	VG1912

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-2, F57525-4

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 80-121%
2037-26-5	Toluene-D8	92% 71-130%
460-00-4	4-Bromofluorobenzene	96% 59-148%
17060-07-0	1,2-Dichloroethane-D4	101% 77-123%

## Method Blank Summary

Page 1 of 2

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2475-MB	J038629.D	1	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
107-02-8	Acrolein	ND	20	9.0	ug/l	
107-13-1	Acrylonitrile	ND	10	2.0	ug/l	
71-43-2	Benzene	ND	1.0	0.20	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.29	ug/l	
75-25-2	Bromoform	ND	1.0	0.28	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.20	ug/l	
75-00-3	Chloroethane	ND	2.0	0.46	ug/l	
67-66-3	Chloroform	ND	1.0	0.21	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	1.2	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.29	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.25	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.23	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.25	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.28	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.24	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.23	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.20	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.20	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.54	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.38	ug/l	
75-09-2	Methylene chloride	1.1	5.0	1.0	ug/l	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.25	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.29	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.37	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.30	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	1.0	0.27	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.38	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.43	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.34	ug/l	

## Method Blank Summary

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Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VJ2475-MB	J038629.D	1	05/28/08	JG	n/a	n/a	VJ2475

The QC reported here applies to the following samples:

Method: SW846 8260B

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
1330-20-7	Xylene (total)	ND	3.0	0.56	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	98% 87-116%
17060-07-0	1,2-Dichloroethane-D4	99% 76-127%
2037-26-5	Toluene-D8	109% 86-112%
460-00-4	4-Bromofluorobenzene	111% 84-120%

## Instrument Performance Check (BFB)

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1901-BFB

Injection Date: 05/05/08

Lab File ID: G0050132.D

Injection Time: 13:53

Instrument ID: GCMSG

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	43277	20.2	Pass
75	30.0 - 60.0% of mass 95	94771	44.3	Pass
95	Base peak, 100% relative abundance	213781	100.0	Pass
96	5.0 - 9.0% of mass 95	14469	6.8	Pass
173	Less than 2.0% of mass 174	33	0.02 (0.02) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	182982	85.6	Pass
175	5.0 - 9.0% of mass 174	13895	6.5 (7.6) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	179473	84.0 (98.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	12129	5.7 (6.8) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VG1901-IC1901	G0050133.D	05/05/08	14:23	00:30	Initial cal 1
VG1901-IC1901	G0050134.D	05/05/08	14:49	00:56	Initial cal 2
VG1901-IC1901	G0050135.D	05/05/08	15:14	01:21	Initial cal 3
VG1901-ICC1901	G0050136.D	05/05/08	15:40	01:47	Initial cal 4
VG1901-IC1901	G0050137.D	05/05/08	16:05	02:12	Initial cal 5
VG1901-IC1901	G0050138.D	05/05/08	16:31	02:38	Initial cal 6
VG1901-ICV1901	G0050140.D	05/05/08	17:22	03:29	Initial cal verification 3
VG1901-BS	G0050141.D	05/05/08	17:47	03:54	Blank Spike
VG1901-MB	G0050142.D	05/05/08	18:13	04:20	Method Blank
ZZZZZZ	G0050143.D	05/05/08	18:38	04:45	(unrelated sample)
ZZZZZZ	G0050144.D	05/05/08	19:04	05:11	(unrelated sample)
ZZZZZZ	G0050145.D	05/05/08	19:29	05:36	(unrelated sample)
ZZZZZZ	G0050147.D	05/05/08	20:21	06:28	(unrelated sample)
ZZZZZZ	G0050148.D	05/05/08	20:46	06:53	(unrelated sample)
F57131-2	G0050149.D	05/05/08	21:12	07:19	(used for QC only; not part of job F57525)
F57131-2MS	G0050150.D	05/05/08	21:37	07:44	Matrix Spike
F57131-2MSD	G0050151.D	05/05/08	22:03	08:10	Matrix Spike Duplicate
ZZZZZZ	G0050152.D	05/05/08	22:28	08:35	(unrelated sample)
ZZZZZZ	G0050153.D	05/05/08	22:54	09:01	(unrelated sample)
ZZZZZZ	G0050154.D	05/05/08	23:19	09:26	(unrelated sample)
ZZZZZZ	G0050155.D	05/05/08	23:45	09:52	(unrelated sample)
ZZZZZZ	G0050156.D	05/06/08	00:10	10:17	(unrelated sample)
ZZZZZZ	G0050157.D	05/06/08	00:36	10:43	(unrelated sample)
ZZZZZZ	G0050159.D	05/06/08	01:01	11:08	(unrelated sample)

## Instrument Performance Check (BFB)

Page 2 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1901-BFB

Injection Date: 05/05/08

Lab File ID: G0050132.D

Injection Time: 13:53

Instrument ID: GCMSG

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	G0050160.D	05/06/08	01:27	11:34	(unrelated sample)

5.4

5

## Initial Calibration Summary

Page 1 of 3

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1901-ICC1901  
 Lab FileID: G0050136.D

## Response Factor Report MSVOA1

Method : C:\MSDCHEM\1\METHODS\APP9-GS.M (RTE Integrator)  
 Title : SW-846 Method 5035A/8260B  
 Last Update : Tue May 06 12:42:40 2008  
 Response via : Initial Calibration

## Calibration Files

1 =G0050133.D 2 =G0050134.D 3 =G0050135.D 4 =G0050136.D  
 5 =G0050137.D 6 =G0050138.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----							
2) Dichlorodifluoromet	0.277	0.335	0.340	0.298	0.297	0.317	0.311	7.93
3) P Chloromethane	0.515	0.554	0.553	0.473	0.475	0.500	0.512	7.01
4) C Vinyl Chloride	0.331	0.389	0.345	0.307	0.334	0.335	9.07	
5) Bromomethane	0.214	0.215	0.179	0.133	0.114	0.110	0.161	29.97
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9882								
Response Ratio = 0.00000 + 0.16878 *A + -0.01552 *A^2								
6) Chloroethane	0.165	0.185	0.172	0.139	0.128	0.124	0.152	16.56
---- Linear regr., Force(0,0) ---- Coefficient = 0.9919								
Response Ratio = 0.00000 + 0.12933 *A								
7) Trichlorofluorometh	0.326	0.379	0.363	0.311	0.301	0.295	0.329	10.46
---- Linear regr., Force(0,0) ---- Coefficient = 0.9973								
Response Ratio = 0.00000 + 0.30164 *A								
8) Ethyl Ether	0.212	0.294	0.272	0.260	0.256	0.251	0.258	10.54
9) 1,2-Dichlorotrifluo	0.429	0.481	0.469	0.412	0.393	0.404	0.431	8.32
10) C 1,1-Dichloroethene	0.606	0.649	0.641	0.546	0.540	0.551	0.589	8.43
11) Freon 113	0.319	0.331	0.320	0.273	0.267	0.274	0.297	9.71
12) Carbon Disulfide	1.009	1.034	1.064	0.931	0.918	0.959	0.986	5.98
13) Iodomethane	0.661	0.733	0.723	0.674	0.665	0.686	0.690	4.40
14) Allyl chloride	0.728	0.805	0.810	0.736	0.748	0.769	0.766	4.53
15) Methylene Chloride	1.582	0.895	0.716	0.631	0.614	0.625	0.844	44.68
---- Linear regr., Force(0,0) ---- Coefficient = 0.9991								
Response Ratio = 0.00000 + 0.62711 *A								
16) Acetone	0.198	0.181	0.170	0.172	0.175	0.172	0.178	6.01
17) Methyl acetate	0.315	0.394	0.361	0.361	0.344	0.351	0.354	7.24
18) trans-1,2-Dichloroe	0.616	0.641	0.647	0.570	0.575	0.575	0.604	5.81
19) Hexane	0.358	0.399	0.369	0.316	0.310	0.311	0.344	10.75
20) Methyl Tert Butyl E	0.829	0.968	0.916	0.917	0.906	0.905	0.907	4.94
21) Acetonitrile	0.029	0.029	0.033	0.035	0.031	0.031	0.031	7.89
22) Di-isopropyl ether	1.485	1.656	1.598	1.556	1.560	1.551	1.568	3.62
23) Chloroprene	0.594	0.644	0.632	0.568	0.581	0.592	0.602	4.93
24) P 1,1-Dichloroethane	0.676	0.720	0.708	0.647	0.652	0.657	0.677	4.56
25) Acrylonitrile	0.085	0.116	0.122	0.124	0.130	0.125	0.117	13.89
---- Linear regr., Force(0,0) ---- Coefficient = 0.9991								
Response Ratio = 0.00000 + 0.12634 *A								
26) ETBE	1.099	1.306	1.220	1.224	1.209	1.218	1.213	5.44
27) Vinyl acetate	0.502	0.500	0.555	0.564	0.582	0.541	0.541	6.20
28) cis-1,2-Dichloroeth	0.335	0.376	0.373	0.340	0.343	0.347	0.352	4.96
29) 2,2-Dichloropropane	0.340	0.340	0.326	0.295	0.313	0.319	0.322	5.35
30) Bromochloromethane	0.193	0.240	0.234	0.226	0.227	0.216	0.223	7.55
31) Cyclohexane	0.715	0.704	0.688	0.595	0.590	0.592	0.647	9.39

## Initial Calibration Summary

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1901-ICC1901

Lab FileID: G0050136.D

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32) C	Chloroform	0.644	0.709	0.698	0.638	0.638	0.644	0.662	4.93
33)	Ethyl acetate	0.410	0.432	0.434	0.448	0.453	0.425	0.434	3.65
34)	Tetrahydrofuran	0.182	0.144	0.131	0.139	0.135	0.133	0.144	13.32
---- Linear regr., Force(0,0) ---- Coefficient = 0.9994									
Response Ratio = 0.00000 + 0.13424 *A									
35) S	Dibromofluoromethan	0.337	0.340	0.322	0.338	0.335	0.318	0.331	2.79
36)	Carbon Tetrachlorid	0.458	0.485	0.531	0.413	0.416	0.422	0.454	10.34
37)	1,1,1-Trichloroetha	0.456	0.516	0.500	0.456	0.464	0.471	0.477	5.32
38)	2-Butanone	0.239	0.269	0.251	0.254	0.265	0.251	0.255	4.16
39)	1,1-Dichloropropene	0.485	0.513	0.505	0.450	0.459	0.463	0.479	5.42
40)	Propionitrile	0.045	0.053	0.050	0.049	0.048	0.044	0.048	6.91
41)	Methacrylonitrile	0.334	0.379	0.365	0.348	0.336	0.312	0.346	6.93
42)	Benzene	1.186	1.293	1.232	1.092	1.087	1.051	1.157	8.23
43)	TAME	0.768	0.902	0.831	0.791	0.763	0.737	0.799	7.45
44) S	1,2-Dichloroethane-	0.415	0.433	0.426	0.406	0.411	0.404	0.416	2.73
45)	1,2-Dichloroethane	0.532	0.614	0.605	0.592	0.589	0.576	0.585	4.98
46)	Trichloroethene	0.370	0.400	0.383	0.327	0.332	0.331	0.357	8.77
47)	Methylcyclohexane	0.460	0.493	0.477	0.402	0.402	0.396	0.438	9.90
48)	Dibromomethane	0.205	0.267	0.260	0.252	0.253	0.252	0.248	8.84
49) C	1,2-Dichloropropane	0.386	0.418	0.408	0.381	0.375	0.372	0.390	4.81
50)	Bromodichloromethan	0.468	0.550	0.554	0.518	0.527	0.529	0.525	5.88
51)	Methyl methacrylate	0.418	0.497	0.490	0.474	0.496	0.486	0.477	6.31
52)	2-Chloroethyl vinyl	0.094	0.125	0.133	0.138	0.145	0.146	0.130	14.93
---- Linear regr., Force(0,0) ---- Coefficient = 0.9995									
Response Ratio = 0.00000 + 0.14400 *A									
53)	cis-1,3-Dichloropro	0.487	0.594	0.598	0.564	0.575	0.572	0.565	7.16
54) I	Chlorobenzene-d5	-----ISTD-----							
55) S	Toluene-d8	1.254	1.307	1.350	1.420	1.491	1.514	1.390	7.44
56) C	Toluene	1.658	1.689	1.708	1.596	1.705	1.723	1.680	2.79
57)	2-Nitropropane	0.168	0.170	0.176	0.187	0.201	0.204	0.184	8.43
58)	4-Methyl-2-pentanone	0.576	0.675	0.695	0.697	0.735	0.718	0.683	8.23
59)	trans-1,3-Dichlorop	0.477	0.653	0.683	0.673	0.715	0.722	0.654	13.82
---- Linear regr., Force(0,0) ---- Coefficient = 0.9991									
Response Ratio = 0.00000 + 0.71155 *A									
60)	Tetrachloroethene	0.535	0.606	0.619	0.572	0.587	0.596	0.586	5.09
61)	Ethyl methacrylate	0.493	0.597	0.649	0.673	0.721	0.735	0.645	13.91
---- Linear regr., Force(0,0) ---- Coefficient = 0.9986									
Response Ratio = 0.00000 + 0.71900 *A									
62)	1,1,2-Trichloroetha	0.317	0.377	0.375	0.382	0.399	0.409	0.377	8.50
63)	Dibromochloromethan	0.416	0.538	0.565	0.587	0.626	0.632	0.560	14.15
64)	1,3-Dichloropropane	0.635	0.713	0.739	0.747	0.788	0.809	0.738	8.30
65)	1,2-Dibromoethane	0.344	0.450	0.454	0.469	0.506	0.514	0.456	13.40
---- Linear regr., Force(0,0) ---- Coefficient = 0.9984									
Response Ratio = 0.00000 + 0.50325 *A									
66)	2-hexanone	0.411	0.495	0.505	0.519	0.553	0.545	0.505	10.12
67)	1-Chlorohexane	0.530	0.575	0.573	0.503	0.557	0.569	0.551	5.24
68) C	Ethylbenzene	1.628	1.794	1.837	1.681	1.758	1.814	1.752	4.66
69) P	Chlorobenzene	0.887	1.042	1.072	0.995	1.057	1.067	1.020	6.91
70)	1,1,1,2-Tetrachloro	0.340	0.439	0.468	0.448	0.470	0.492	0.443	12.16
71)	m,p-Xylene	1.390	1.538	1.529	1.354	1.400	1.405	1.436	5.40
72)	o-Xylene	1.334	1.587	1.610	1.471	1.548	1.612	1.527	7.09
73)	Styrene	0.921	1.093	1.098	1.054	1.120	1.171	1.076	7.91
74) P	Bromoform	0.356	0.452	0.484	0.509	0.544	0.558	0.484	15.22
---- Linear regr., Force(0,0) ---- Coefficient = 0.9984									

5.7  
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## Initial Calibration Summary

Page 3 of 3

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1901-ICC1901  
 Lab FileID: G0050136.D

$$\text{Response Ratio} = 0.00000 + 0.54422 * A$$

75)	Isopropylbenzene	1.285	1.521	1.546	1.412	1.485	1.538	1.465	6.87
76) I	1,4-Dichlorobenzene-d	-----ISTD-----							
77) S	4-Bromofluorobenzen	0.985	0.990	0.989	1.004	1.009	1.036	1.002	1.90
78)	cis-1,4-Dichloro-2-	0.310	0.379	0.364	0.368	0.392	0.403	0.369	8.81
79)	n-Propylbenzene	3.513	3.901	3.834	3.404	3.482	3.556	3.615	5.61
80)	Bromobenzene	0.870	0.996	0.960	0.891	0.905	0.906	0.921	5.12
81) P	1,1,2,2-Tetrachloro	0.829	0.993	0.960	0.957	0.946	0.953	0.940	6.03
82)	1,3,5-Trimethylbenz	2.307	2.767	2.641	2.349	2.371	2.445	2.480	7.40
83)	2-Chlorotoluene	2.609	2.815	2.753	2.534	2.570	2.659	2.657	4.09
84)	trans-1,4-Dichloro-	0.128	0.137	0.148	0.153	0.165	0.168	0.150	10.54
85)	1,2,3-Trichloroprop	0.240	0.273	0.242	0.249	0.244	0.254	0.250	4.86
86)	Cyclohexanone	0.034	0.031	0.031	0.031	0.033	0.034	0.032	4.17
87)	4-Chlorotoluene	2.361	2.548	2.553	2.310	2.348	2.421	2.423	4.32
88)	tert-Butylbenzene	1.703	1.854	1.780	1.596	1.623	1.688	1.707	5.66
89)	1,2,4-Trimethylbenz	2.425	2.778	2.676	2.363	2.361	2.392	2.499	7.24
90)	Pentachloroethane	0.580	0.636	0.628	0.573	0.550	0.535	0.584	7.03
91)	sec-Butylbenzene	3.010	3.304	3.277	2.851	2.890	3.022	3.059	6.26
92)	4-Isopropyltoluene	2.291	2.541	2.575	2.244	2.283	2.300	2.372	6.13
93)	1,3-Dichlorobenzene	1.471	1.597	1.593	1.486	1.533	1.551	1.538	3.41
94)	1,4-Dichlorobenzene	1.453	1.596	1.604	1.493	1.464	1.542	1.525	4.29
95)	n-Butylbenzene	1.330	1.453	1.617	1.293	1.450	1.484	1.438	8.05
96)	Benzyl Chloride	0.243	0.274	0.296	0.292	0.306	0.302	0.285	8.29
97)	1,2-Dichlorobenzene	1.354	1.550	1.523	1.431	1.473	1.480	1.469	4.76
98)	1,2-Dibromo-3-Chlor	0.185	0.218	0.193	0.196	0.201	0.205	0.199	5.71
99)	Hexachlorobutadiene	1.065	1.125	1.105	0.987	0.941	0.989	1.035	7.12
100)	1,2,4-Trichlorobenz	0.938	1.046	1.121	1.068	1.065	1.130	1.061	6.49
101)	Naphthalene	1.384	1.671	1.783	1.814	1.811	1.892	1.726	10.54
102)	1,2,3-Trichlorobenz	0.784	0.979	0.981	0.925	0.915	0.941	0.921	7.84
103) I	Tert Butyl Alcohol-d1	-----ISTD-----							
104)	Ethanol	0.108	0.194	0.127	0.137	0.133	0.127	0.138	21.33
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9958							
	Response Ratio = 0.00000 + 0.13042 *A								
105)	Acrolein	0.762	1.172	1.142	1.097	1.218	1.227	1.103	15.75
	---- Linear regr., Force(0,0) ----	Coefficient = 0.9975							
	Response Ratio = 0.00000 + 1.20387 *A								
106)	Tert Butyl Alcohol	1.296	1.533	1.415	1.374	1.546	1.549	1.452	7.31
107)	Isobutyl alcohol	0.437	0.549	0.506	0.495	0.576	0.796	0.560	22.34
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9908							
	Response Ratio = 0.00000 + 0.22869 *A + 0.03396 *A^2								
108)	Tert Amyl Alcohol	1.135	1.377	1.220	1.213	1.379	1.309	1.272	7.77
109)	1,4-Dioxane	0.113	0.097	0.099	0.124	0.123	0.111		11.37

(#) = Out of Range

APP9-GS.M

Tue May 06 16:50:47 2008



## Instrument Performance Check (BFB)

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample:	VG1912-BFB	Injection Date:	05/19/08
Lab File ID:	G0050451.D	Injection Time:	09:34
Instrument ID:	GCMMSG		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	38724	21.0	Pass
75	30.0 - 60.0% of mass 95	83913	45.5	Pass
95	Base peak, 100% relative abundance	184407	100.0	Pass
96	5.0 - 9.0% of mass 95	12820	7.0	Pass
173	Less than 2.0% of mass 174	0	0.0 (0.0) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	157856	85.6	Pass
175	5.0 - 9.0% of mass 174	12171	6.6 (7.7) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	154304	83.7 (97.7) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	10256	5.6 (6.6) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VG1912-CC1901	G0050452.D	05/19/08	09:54	00:20	Continuing cal 4
VG1912-BS	G0050453.D	05/19/08	10:39	01:05	Blank Spike
VG1912-MB	G0050454.D	05/19/08	11:04	01:30	Method Blank
ZZZZZZ	G0050456.D	05/19/08	11:55	02:21	(unrelated sample)
ZZZZZZ	G0050457.D	05/19/08	12:20	02:46	(unrelated sample)
ZZZZZZ	G0050458.D	05/19/08	12:45	03:11	(unrelated sample)
ZZZZZZ	G0050459.D	05/19/08	13:11	03:37	(unrelated sample)
ZZZZZZ	G0050460.D	05/19/08	13:36	04:02	(unrelated sample)
ZZZZZZ	G0050461.D	05/19/08	14:02	04:28	(unrelated sample)
F57493-14	G0050462.D	05/19/08	14:27	04:53	(used for QC only; not part of job F57525)
ZZZZZZ	G0050464.D	05/19/08	15:24	05:50	(unrelated sample)
F57525-2	G0050465.D	05/19/08	15:49	06:15	KWSM-SO-DRUM-2
F57525-4	G0050466.D	05/19/08	16:15	06:41	KWSM-SO-DRUM-4
ZZZZZZ	G0050467.D	05/19/08	16:41	07:07	(unrelated sample)
F57493-14MS	G0050468.D	05/19/08	17:06	07:32	Matrix Spike
F57493-14MSD	G0050469.D	05/19/08	17:32	07:58	Matrix Spike Duplicate
ZZZZZZ	G0050470.D	05/19/08	17:57	08:23	(unrelated sample)
ZZZZZZ	G0050471.D	05/19/08	18:23	08:49	(unrelated sample)
ZZZZZZ	G0050472.D	05/19/08	18:48	09:14	(unrelated sample)
ZZZZZZ	G0050473.D	05/19/08	19:13	09:39	(unrelated sample)
ZZZZZZ	G0050474.D	05/19/08	19:39	10:05	(unrelated sample)
ZZZZZZ	G0050475.D	05/19/08	20:04	10:30	(unrelated sample)
ZZZZZZ	G0050476.D	05/19/08	20:30	10:56	(unrelated sample)
ZZZZZZ	G0050477.D	05/19/08	20:55	11:21	(unrelated sample)

## Continuing Calibration Summary

Page 1 of 3

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1912-CC1901  
 Lab FileID: G0050452.D

## Evaluate Continuing Calibration Report

Data File : G:\HPCHEM\1\DATA\051908\G0050452.D Vial: 1  
 Acq On : 19 May 2008 9:54 am Operator: StevenH  
 Sample : cc1901-4 Inst : MSVOA1  
 Misc : ms9414,vg1912,5.00,,,,, Multiplr: 1.00  
 MS Integration Params: small.p

Method : C:\MSDCHEM\1\METHODS\APP9-GS.M (RTE Integrator)  
 Title : SW-846 Method 5035A/8260B  
 Last Update : Tue May 06 12:42:40 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	112	0.00	11.25
2	Dichlorodifluoromethane	0.311	0.240	22.8#	90	0.00	4.26
3 P	Chloromethane	0.512	0.442	13.7	105	-0.02	4.67
4 C	Vinyl Chloride	0.335	0.314	6.3	115	0.00	4.88
----- Amount Calc. %Drift -----							
5	Bromomethane	100.000	77.955	22.0#	95	-0.02	5.53
6	Chloroethane	100.000	109.418	-9.4	114	-0.02	5.79
7	Trichlorofluoromethane	100.000	107.514	-7.5	117	0.00	6.04
----- AvgRF CCRF %Dev -----							
8	Ethyl Ether	0.258	0.246	4.7	107	0.00	6.53
9	1,2-Dichlorotrifluoroetha	0.431	0.430	0.2	117	-0.03	6.85
10 C	1,1-Dichloroethene	0.589	0.567	3.7	117	-0.03	6.92
11	Freon 113	0.297	0.300	-1.0	123	-0.03	6.96
12	Carbon Disulfide	0.986	0.941	4.6	113	-0.02	7.02
13	Iodomethane	0.690	0.664	3.8	111	-0.03	7.20
14	Allyl chloride	0.766	0.701	8.5	107	0.00	7.65
----- Amount Calc. %Drift -----							
15	Methylene Chloride	100.000	94.909	5.1	106	-0.02	7.82
----- AvgRF CCRF %Dev -----							
16	Acetone	0.178	0.165	7.3	108	0.00	7.88
17	Methyl acetate	0.354	0.311	12.1	97	0.00	8.02
18	trans-1,2-Dichloroethene	0.604	0.574	5.0	113	0.00	8.05
19	Hexane	0.344	0.355	-3.2	126	-0.02	8.12
20	Methyl Tert Butyl Ether	0.907	0.879	3.1	108	0.00	8.16
21	Acetonitrile	0.031	0.038	-22.6#	120	-0.02	8.57
22	Di-isopropyl ether	1.568	1.464	6.6	106	0.00	8.65
23	Chloroprene	0.602	0.573	4.8	113	0.00	8.89
24 P	1,1-Dichloroethane	0.677	0.652	3.7	113	0.00	8.94
----- Amount Calc. %Drift -----							
25	Acrylonitrile	500.000	464.896	7.0	106	0.00	9.01
----- AvgRF CCRF %Dev -----							
26	ETBE	1.213	1.188	2.1	109	0.00	9.16
27	Vinyl acetate	0.541	0.283	47.7#	56	0.00	9.20
28	cis-1,2-Dichloroethene	0.352	0.335	4.8	111	0.00	9.67
29	2,2-Dichloropropane	0.322	0.343	-6.5	131	0.00	9.82
30	Bromochloromethane	0.223	0.220	1.3	109	0.00	9.93

# Continuing Calibration Summary

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1912-CC1901  
Lab FileID: G0050452.D

Page 2 of 3

31	Cyclohexane	0.647	0.616	4.8	116	0.00	9.96
32 C	Chloroform	0.662	0.631	4.7	111	0.00	9.98
33	Ethyl acetate	0.434	0.418	3.7	105	0.00	10.07
----- Amount Calc. %Drift -----							
34	Tetrahydrofuran	100.000	102.811	-2.8	112	0.00	10.22
----- AvgRF CCRF %Dev -----							
35 S	Dibromofluoromethane	0.331	0.344	-3.9	115	0.00	10.23
36	Carbon Tetrachloride	0.454	0.426	6.2	116	0.00	10.22
37	1,1,1-Trichloroethane	0.477	0.477	0.0	117	-0.02	10.30
38	2-Butanone	0.255	0.243	4.7	107	0.00	10.37
39	1,1-Dichloropropene	0.479	0.456	4.8	114	0.00	10.45
40	Propionitrile	0.048	0.046	4.2	106	0.00	10.77
41	Methacrylonitrile	0.346	0.325	6.1	105	0.00	10.80
42	Benzene	1.157	1.078	6.8	111	0.00	10.76
43	TAME	0.799	0.759	5.0	108	0.00	10.81
44 S	1,2-Dichloroethane-d4	0.416	0.441	-6.0	122	0.00	10.92
45	1,2-Dichloroethane	0.585	0.554	5.3	105	0.00	11.01
46	Trichloroethene	0.357	0.333	6.7	114	0.00	11.45
47	Methylcyclohexane	0.438	0.426	2.7	119	0.00	11.46
48	Dibromomethane	0.248	0.236	4.8	105	0.00	11.97
49 C	1,2-Dichloropropane	0.390	0.360	7.7	106	0.00	12.08
50	Bromodichloromethane	0.525	0.501	4.6	109	0.00	12.12
51	Methyl methacrylate	0.477	0.447	6.3	106	0.00	12.22
----- Amount Calc. %Drift -----							
52	2-Chloroethyl vinyl ether	500.000	700.532	-40.1#	164	0.00	12.71
----- AvgRF CCRF %Dev -----							
53	cis-1,3-Dichloropropene	0.565	0.553	2.1	110	0.00	12.84
54 I	Chlorobenzene-d5	1.000	1.000	0.0	112	0.00	14.82
55 S	Toluene-d8	1.390	1.376	1.0	109	0.00	13.06
56 C	Toluene	1.680	1.584	5.7	111	0.00	13.12
57	2-Nitropropane	0.184	0.180	2.2	108	0.00	13.39
58	4-Methyl-2-pentanone	0.683	0.684	-0.1	110	0.00	13.49
----- Amount Calc. %Drift -----							
59	trans-1,3-Dichloropropene	100.000	89.503	10.5	106	0.00	13.56
----- AvgRF CCRF %Dev -----							
60	Tetrachloroethene	0.586	0.570	2.7	112	0.00	13.58
----- Amount Calc. %Drift -----							
61	Ethyl methacrylate	100.000	88.109	11.9	106	0.00	13.65
----- AvgRF CCRF %Dev -----							
62	1,1,2-Trichloroethane	0.377	0.359	4.8	105	0.00	13.76
63	Dibromochloromethane	0.560	0.536	4.3	103	0.00	13.98
64	1,3-Dichloropropane	0.738	0.723	2.0	109	0.00	14.08
----- Amount Calc. %Drift -----							
65	1,2-Dibromoethane	100.000	90.200	9.8	109	0.00	14.30
----- AvgRF CCRF %Dev -----							
66	2-hexanone	0.505	0.515	-2.0	111	0.00	14.41
67	1-Chlorohexane	0.551	0.553	-0.4	123	0.00	14.73
68 C	Ethylbenzene	1.752	1.696	3.2	113	0.00	14.81
69 P	Chlorobenzene	1.020	0.989	3.0	112	0.00	14.84

5.7  
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# Continuing Calibration Summary

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Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: VG1912-CC1901  
Lab FileID: G0050452.D

70	1,1,1,2-Tetrachloroethane	0.443	0.440	0.7	110	0.00	14.89
71	m,p-Xylene	1.436	1.390	3.2	115	0.00	14.96
72	o-Xylene	1.527	1.474	3.5	112	0.00	15.42
73	Styrene	1.076	1.054	2.0	112	0.00	15.47
<hr/>							
74 P	Bromoform	Amount 100.000	Calc. 85.530	%Drift 14.5	103	0.00	15.56
<hr/>							
75	Isopropylbenzene	AvgRF 1.465	CCRF 1.443	%Dev 1.5	115	0.00	15.72
76 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	111	0.00	17.09
77 S	4-Bromofluorobenzene	1.002	0.995	0.7	110	0.00	16.04
78	cis-1,4-Dichloro-2-butene	0.369	0.373	-1.1	113	0.00	16.07
79	n-Propylbenzene	3.615	3.540	2.1	116	0.00	16.12
80	Bromobenzene	0.921	0.893	3.0	111	0.00	16.17
81 P	1,1,2,2-Tetrachloroethane	0.940	0.931	1.0	108	0.00	16.19
82	1,3,5-Trimethylbenzene	2.480	2.439	1.7	115	0.00	16.28
83	2-Chlorotoluene	2.657	2.583	2.8	113	0.00	16.32
84	trans-1,4-Dichloro-2-Bute	0.150	0.155	-3.3	113	0.00	16.36
85	1,2,3-Trichloropropane	0.250	0.249	0.4	111	0.00	16.35
86	Cyclohexanone	0.032	0.034	-6.3	121	0.00	16.44
87	4-Chlorotoluene	2.423	2.376	1.9	114	0.00	16.47
88	tert-Butylbenzene	1.707	1.691	0.9	118	0.00	16.60
89	1,2,4-Trimethylbenzene	2.499	2.391	4.3	112	0.00	16.66
90	Pentachloroethane	0.584	0.576	1.4	112	0.00	16.67
91	sec-Butylbenzene	3.059	3.020	1.3	118	0.00	16.75
92	4-Isopropyltoluene	2.372	2.354	0.8	117	0.00	16.86
93	1,3-Dichlorobenzene	1.538	1.540	-0.1	115	0.00	17.03
94	1,4-Dichlorobenzene	1.525	1.500	1.6	112	0.00	17.11
95	n-Butylbenzene	1.438	1.410	1.9	121	0.00	17.26
96	Benzyl Chloride	0.285	0.298	-4.6	113	0.00	17.31
97	1,2-Dichlorobenzene	1.469	1.430	2.7	111	0.00	17.51
98	1,2-Dibromo-3-Chloropropa	0.199	0.186	6.5	106	0.00	18.25
99	Hexachlorobutadiene	1.035	0.973	6.0	110	0.00	18.82
100	1,2,4-Trichlorobenzene	1.061	1.108	-4.4	115	0.00	18.91
101	Naphthalene	1.726	1.802	-4.4	110	0.00	19.26
102	1,2,3-Trichlorobenzene	0.921	0.946	-2.7	114	0.00	19.46
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	129	-0.02	8.13
<hr/>							
104	Ethanol	Amount 2000.000	Calc. 1955.600	%Drift 2.2	120	0.00	6.74
105	Acrolein	500.000	195.905	60.8#	56	-0.02	7.44
<hr/>							
106	Tert Butyl Alcohol	AvgRF 1.452	CCRF 1.257	%Dev 13.4	118	0.00	8.24
<hr/>							
107	Isobutyl alcohol	Amount 2000.000	Calc. 1814.010	%Drift 9.3	112	0.00	10.85
<hr/>							
108	Tert Amyl Alcohol	AvgRF 1.272	CCRF 1.088	%Dev 14.5	116	0.00	11.00
109	1,4-Dioxane	0.111	0.088	20.7#	115	0.00	12.35

(#) = Out of Range  
G0050136.D APP9-GS.M

SPCC's out = 0 CCC's out = 0  
Mon May 19 14:37:16 2008

## Instrument Performance Check (BFB)

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2474-BFB	Injection Date: 05/27/08
Lab File ID: J038597.D	Injection Time: 09:44
Instrument ID: GCMSJ	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	23592	20.0	Pass
75	30.0 - 60.0% of mass 95	53045	45.0	Pass
95	Base peak, 100% relative abundance	117981	100.0	Pass
96	5.0 - 9.0% of mass 95	8074	6.8	Pass
173	Less than 2.0% of mass 174	226	0.19 (0.23) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	97800	82.9	Pass
175	5.0 - 9.0% of mass 174	6653	5.6 (6.8) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	96325	81.6 (98.5) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	6895	5.8 (7.2) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2474-IC2474	J038598.D	05/27/08	10:11	00:27	Initial cal 1
VJ2474-IC2474	J038599.D	05/27/08	10:37	00:53	Initial cal 2
VJ2474-IC2474	J038600.D	05/27/08	11:06	01:22	Initial cal 3
VJ2474-ICC2474	J038601.D	05/27/08	11:33	01:49	Initial cal 4
VJ2474-IC2474	J038602.D	05/27/08	12:04	02:20	Initial cal 5
VJ2474-IC2474	J038603.D	05/27/08	12:31	02:47	Initial cal 6
VJ2474-ICV2474	J038604.D	05/27/08	13:08	03:24	Initial cal verification 4
VJ2474-BS	J038605.D	05/27/08	13:40	03:56	Blank Spike
VJ2474-MB	J038606.D	05/27/08	14:31	04:47	Method Blank
ZZZZZZ	J038607.D	05/27/08	14:55	05:11	(unrelated sample)
ZZZZZZ	J038608.D	05/27/08	15:20	05:36	(unrelated sample)
ZZZZZZ	J038609.D	05/27/08	15:44	06:00	(unrelated sample)
ZZZZZZ	J038610.D	05/27/08	16:09	06:25	(unrelated sample)
ZZZZZZ	J038611.D	05/27/08	16:33	06:49	(unrelated sample)
F57603-4	J038612.D	05/27/08	16:58	07:14	(used for QC only; not part of job F57525)
F57603-4MS	J038613.D	05/27/08	17:22	07:38	Matrix Spike
F57603-4MSD	J038614.D	05/27/08	17:46	08:02	Matrix Spike Duplicate
ZZZZZZ	J038615.D	05/27/08	18:13	08:29	(unrelated sample)
ZZZZZZ	J038616.D	05/27/08	18:37	08:53	(unrelated sample)
ZZZZZZ	J038620.D	05/27/08	20:15	10:31	(unrelated sample)
ZZZZZZ	J038621.D	05/27/08	20:40	10:56	(unrelated sample)
ZZZZZZ	J038622.D	05/27/08	21:04	11:20	(unrelated sample)
ZZZZZZ	J038623.D	05/27/08	21:28	11:44	(unrelated sample)

## Initial Calibration Summary

Page 1 of 3

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2474-ICC2474  
 Lab FileID: J038601.D

## Response Factor Report MSVOA6

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Wed May 28 13:22:02 2008  
 Response via : Initial Calibration

## Calibration Files

1 =J038598.D 2 =J038599.D 3 =J038600.D 4 =J038601.D  
 5 =J038602.D 6 =J038603.D

Compound	1	2	3	4	5	6	Avg	%RSD
1) I Fluorobenzene	-----ISTD-----							
2) Dichlorodifluoromet	0.158	0.184	0.187	0.179	0.178	0.171	0.176	5.83
3) P Chloromethane	0.670	0.549	0.610	0.570	0.556	0.520	0.579	9.20
4) C Vinyl Chloride	0.496	0.468	0.534	0.521	0.509	0.485	0.502	4.80
5) Bromomethane	0.353	0.294	0.318	0.314	0.311	0.299	0.315	6.64
6) Chloroethane	0.309	0.325	0.310	0.294	0.301	0.283	0.304	4.76
7) Trichlorofluorometh	0.337	0.416	0.478	0.401	0.483	0.431	0.424	12.77
8) Ethyl Ether	0.444	0.423	0.518	0.515	0.478	0.376	0.459	12.08
9) 1,2-Dichlorotrifluo	0.496	0.514	0.580	0.558	0.554	0.495	0.533	6.74
10) C 1,1-Dichloroethene	0.459	0.570	0.647	0.608	0.615	0.563	0.577	11.39
11) Freon 113	0.457	0.329	0.401	0.375	0.384	0.363	0.385	11.08
12) Carbon Disulfide	1.607	1.428	1.501	1.445	1.456	1.376	1.469	5.37
13) Iodomethane	0.489	0.628	0.712	0.707	0.743	0.731	0.668	14.44
14) Allyl chloride	0.472	0.581	0.605	0.607	0.631	0.640	0.590	10.36
15) Methylene Chloride	0.767	0.564	0.516	0.491	0.466	0.446	0.542	21.71
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
Response Ratio = 0.00000 + 0.52249 *A + -0.03856 *A^2								
16) Acetone	0.439	0.362	0.361	0.342	0.354	0.349	0.368	9.75
17) Methyl acetate	0.055	0.051	0.048	0.050	0.050	0.052	0.051	4.55
18) trans-1,2-Dichloroe	0.357	0.445	0.423	0.418	0.438	0.450	0.422	8.04
19) Hexane	0.281	0.326	0.300	0.298	0.304	0.309	0.303	4.89
20) Methyl Tert Butyl E	0.708	0.780	0.757	0.755	0.753	0.780	0.756	3.47
21) Acetonitrile	0.028	0.028	0.025	0.024	0.024	0.023	0.025	8.08
22) Di-isopropyl ether	1.086	1.203	1.197	1.181	1.200	1.200	1.178	3.88
23) Chloroprene	0.369	0.418	0.431	0.420	0.439	0.449	0.421	6.64
24) P 1,1-Dichloroethane	0.478	0.563	0.543	0.528	0.544	0.549	0.534	5.55
25) Acrylonitrile	0.118	0.120	0.127	0.126	0.121	0.121	0.122	2.88
26) ETBE	0.822	0.958	0.985	1.000	1.029	1.073	0.978	8.78
27) Vinyl acetate	0.654	0.744	0.789	0.788	0.712	0.642	0.722	8.86
28) cis-1,2-Dichloroeth	0.270	0.303	0.299	0.298	0.316	0.326	0.302	6.41
29) 2,2-Dichloropropane	0.289	0.376	0.360	0.357	0.371	0.375	0.355	9.38
30) Bromochloromethane	0.154	0.173	0.173	0.172	0.187	0.200	0.177	8.84
31) Cyclohexane	0.455	0.574	0.573	0.572	0.608	0.624	0.567	10.46
32) C Chloroform	0.449	0.503	0.481	0.478	0.502	0.521	0.489	5.17
33) Ethyl acetate	0.414	0.415	0.399	0.420	0.392	0.377	0.403	4.11
34) Tetrahydrofuran	0.161	0.106	0.101	0.098	0.100	0.101	0.111	21.96
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999								
Response Ratio = 0.00000 + 0.09815 *A + 0.00123 *A^2								
35) S Dibromofluoromethan	0.237	0.240	0.240	0.242	0.253	0.262	0.246	3.91
36) Carbon Tetrachlorid	0.249	0.316	0.299	0.307	0.312	0.321	0.301	8.75
37) 1,1,1-Trichloroetha	0.320	0.363	0.349	0.347	0.362	0.365	0.351	4.84
38) 2-Butanone	0.171	0.180	0.172	0.176	0.169	0.167	0.173	2.65
39) 1,1-Dichloropropene	0.307	0.395	0.384	0.383	0.396	0.406	0.379	9.55
40) Propionitrile	0.048	0.048	0.051	0.053	0.055	0.059	0.052	7.68

## Initial Calibration Summary

Page 2 of 3

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2474-ICC2474  
 Lab FileID: J038601.D

41)	Methacrylonitrile	0.229	0.250	0.263	0.269	0.256	0.240	0.251	5.91
42)	Benzene	1.030	1.229	1.240	1.261	1.344	1.363	1.245	9.54
43)	TAME	0.667	0.723	0.752	0.770	0.776	0.805	0.749	6.47
44) S	1,2-Dichloroethane-	0.264	0.269	0.276	0.287	0.255	0.270	0.270	3.99
45)	1,2-Dichloroethane	0.363	0.385	0.358	0.354	0.357	0.358	0.362	3.16
46)	Trichloroethene	0.253	0.299	0.295	0.299	0.322	0.333	0.300	9.15
47)	Methylcyclohexane	0.322	0.462	0.466	0.474	0.510	0.521	0.459	15.50
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9998									
Response Ratio = 0.00000 + 0.45679 *A + 0.03293 *A^2									
48)	Dibromomethane	0.152	0.173	0.173	0.177	0.180	0.187	0.174	6.79
49) C	1,2-Dichloropropane	0.309	0.343	0.345	0.353	0.360	0.366	0.346	5.82
50)	Bromodichloromethan	0.298	0.365	0.367	0.371	0.385	0.392	0.363	9.29
51)	Methyl methacrylate	0.279	0.270	0.299	0.329	0.316	0.315	0.301	7.66
52)	2-Chloroethyl vinyl	0.032	0.046	0.066	0.095	0.075	0.093	0.068	37.22
53)	cis-1,3-Dichloropro	0.373	0.467	0.476	0.484	0.508	0.515	0.471	10.91
54) I	Chlorobenzene-d5	-----ISTD-----							
55) S	Toluene-d8	1.307	1.299	1.233	1.199	1.147	1.114	1.217	6.45
56) C	Toluene	1.312	1.509	1.414	1.403	1.360	1.275	1.379	6.03
57)	2-Nitropropane	0.073	0.073	0.076	0.081	0.077	0.075	0.076	3.79
58)	4-Methyl-2-pentanone	0.380	0.412	0.414	0.419	0.367	0.329	0.387	9.11
59)	trans-1,3-Dichlorop	0.378	0.483	0.493	0.511	0.517	0.526	0.485	11.28
60)	Tetrachloroethene	0.298	0.359	0.342	0.349	0.375	0.387	0.352	8.86
61)	Ethyl methacrylate	0.356	0.404	0.461	0.482	0.466	0.470	0.440	11.22
62)	1,1,2-Trichloroetha	0.280	0.293	0.279	0.280	0.270	0.269	0.279	3.10
63)	Dibromochloromethan	0.285	0.311	0.312	0.318	0.324	0.337	0.314	5.46
64)	1,3-Dichloropropane	0.529	0.572	0.552	0.557	0.542	0.534	0.548	2.89
65)	1,2-Dibromoethane	0.276	0.301	0.305	0.311	0.308	0.310	0.302	4.36
66)	2-hexanone	0.227	0.267	0.286	0.293	0.263	0.244	0.263	9.48
67)	1-Chlorohexane	0.292	0.443	0.451	0.460	0.479	0.480	0.434	16.43
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.45416 *A + 0.01368 *A^2									
68) C	Ethylbenzene	1.450	1.674	1.650	1.631	1.584	1.427	1.569	6.74
69) P	Chlorobenzene	0.863	0.989	0.978	0.999	1.039	1.013	0.980	6.24
70)	1,1,1,2-Tetrachloro	0.246	0.303	0.300	0.308	0.314	0.328	0.300	9.41
71)	m,p-Xylene	0.863	1.179	1.190	1.202	1.093	0.906	1.072	14.07
72)	o-Xylene	0.831	1.110	1.162	1.181	1.146	1.093	1.087	11.93
73)	Styrene	0.586	0.832	0.909	0.957	0.956	0.944	0.864	16.67
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 0.95313 *A + -0.00308 *A^2									
74) P	Bromoform	0.166	0.186	0.209	0.227	0.228	0.244	0.210	13.94
75)	Isopropylbenzene	0.864	1.207	1.244	1.271	1.235	1.171	1.166	13.00
76) I	1,4-Dichlorobenzene-d	-----ISTD-----							
77) S	4-Bromofluorobenzen	0.984	0.932	0.866	0.848	0.836	0.823	0.881	7.15
78)	cis-1,4-Dichloro-2-	0.149	0.144	0.153	0.173	0.165	0.157	0.157	6.87
79)	n-Propylbenzene	3.080	3.654	3.495	3.507	3.311	2.833	3.313	9.27
80)	Bromobenzene	0.740	0.779	0.739	0.781	0.846	0.874	0.793	7.02
81) P	1,1,2,2-Tetrachloro	0.892	0.855	0.793	0.785	0.742	0.730	0.800	7.94
82)	1,3,5-Trimethylbenz	1.732	2.208	2.246	2.308	2.397	2.189	2.180	10.65
83)	2-Chlorotoluene	1.908	2.262	2.260	2.318	2.377	2.176	2.217	7.47
84)	trans-1,4-Dichloro-	0.141	0.157	0.164	0.159	0.153	0.155	0.155	5.62
85)	1,2,3-Trichloroprop	0.245	0.211	0.199	0.198	0.191	0.196	0.207	9.69
86)	Cyclohexanone	0.019	0.017	0.018	0.017	0.017	0.016	0.017	5.90
87)	4-Chlorotoluene	1.579	2.007	1.936	1.921	1.937	1.831	1.869	8.15
88)	tert-Butylbenzene	0.947	1.222	1.198	1.205	1.251	1.229	1.175	9.66
89)	1,2,4-Trimethylbenz	1.717	2.273	2.224	2.228	2.247	2.077	2.127	10.00

5.7  
5

## Initial Calibration Summary

Page 3 of 3

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2474-ICC2474  
Lab FileID: J038601.D

90)	Pentachloroethane	0.379	0.422	0.423	0.443	0.478	0.496	0.440	9.56
91)	sec-Butylbenzene	2.096	2.905	2.864	2.836	2.785	2.468	2.659	11.94
92)	4-Isopropyltoluene	1.622	2.178	2.204	2.234	2.272	2.089	2.100	11.53
93)	1,3-Dichlorobenzene	1.149	1.339	1.278	1.292	1.366	1.346	1.295	6.11
94)	1,4-Dichlorobenzene	1.367	1.480	1.378	1.401	1.445	1.403	1.412	3.02
95)	n-Butylbenzene	0.970	1.348	1.423	1.487	1.575	1.526	1.388	15.82
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9992							
	Response Ratio = 0.00000 + 1.50966 *A + 0.01425 *A^2								
96)	Benzyl Chloride	0.212	0.255	0.296	0.328	0.363	0.385	0.306	21.41
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9998							
	Response Ratio = 0.00000 + 0.29080 *A + 0.04794 *A^2								
97)	1,2-Dichlorobenzene	1.090	1.251	1.249	1.259	1.315	1.295	1.243	6.40
98)	1,2-Dibromo-3-Chlor	0.098	0.101	0.104	0.105	0.104	0.104	0.103	2.82
99)	Hexachlorobutadiene	0.333	0.375	0.374	0.368	0.417	0.416	0.381	8.31
100)	1,2,4-Trichlorobenz	0.403	0.560	0.640	0.672	0.795	0.775	0.641	22.70
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9971							
	Response Ratio = 0.00000 + 0.66998 *A + 0.05831 *A^2								
101)	Naphthalene	0.769	0.967	1.202	1.328	1.465	1.400	1.188	22.74
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9977							
	Response Ratio = 0.00000 + 1.33988 *A + 0.03990 *A^2								
102)	1,2,3-Trichlorobenz	0.337	0.448	0.500	0.531	0.631	0.620	0.511	21.60
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9973							
	Response Ratio = 0.00000 + 0.52227 *A + 0.05356 *A^2								
103) I	Tert Butyl Alcohol-dl	-----ISTD-----							
104)	Ethanol	1.018	0.397	0.292	0.262	0.282	0.252	0.417	71.63
105)	acrolein	0.861	0.695	0.680	0.697	0.674	0.686	0.716	10.03
106)	Tert Butyl Alcohol	0.693	1.195	1.063	1.056	1.068	1.109	1.031	16.82
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9998							
	Response Ratio = 0.00000 + 1.01668 *A + 0.02236 *A^2								
107)	tert Amyl alcohol	0.874	0.739	0.934	1.014	0.996	1.067	0.937	12.57
108)	Isobutyl alcohol	1.164	0.643	0.487	0.512	0.466	0.518	0.632	42.43
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9967							
	Response Ratio = 0.00000 + 0.45841 *A + 0.00648 *A^2								
109)	1,4-Dioxane	0.056	0.130	0.118	0.118	0.129	0.135	0.114	25.50
	---- Quadratic regr., Force(0,0) ----	Coefficient = 0.9997							
	Response Ratio = 0.00000 + 0.11122 *A + 0.00297 *A^2								

-----  
(#) = Out of Range

8260-JAPP9.M

Wed May 28 13:53:10 2008



## Instrument Performance Check (BFB)

Page 1 of 2

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample:	VJ2475-BFB	Injection Date:	05/28/08
Lab File ID:	J038626.D	Injection Time:	08:49
Instrument ID:	GCMSJ		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	27229	20.5	Pass
75	30.0 - 60.0% of mass 95	62938	47.4	Pass
95	Base peak, 100% relative abundance	132906	100.0	Pass
96	5.0 - 9.0% of mass 95	9255	7.0	Pass
173	Less than 2.0% of mass 174	408	0.31 (0.35) <sup>a</sup>	Pass
174	50.0 - 100.0% of mass 95	117173	88.2	Pass
175	5.0 - 9.0% of mass 174	8749	6.6 (7.5) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	113498	85.4 (96.9) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	7568	5.7 (6.7) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VJ2475-CC2474	J038627.D	05/28/08	09:45	00:56	Continuing cal 4
VJ2475-BS	J038628.D	05/28/08	10:11	01:22	Blank Spike
VJ2475-MB	J038629.D	05/28/08	11:04	02:15	Method Blank
F57525-1	J038630.D	05/28/08	11:31	02:42	KWSM-GW-DRUM-1
F57525-3	J038631.D	05/28/08	11:55	03:06	KWSM-BCTF-GW-DRUM-3
ZZZZZZ	J038632.D	05/28/08	12:20	03:31	(unrelated sample)
ZZZZZZ	J038633.D	05/28/08	12:44	03:55	(unrelated sample)
F57610-7	J038634.D	05/28/08	13:09	04:20	(used for QC only; not part of job F57525)
ZZZZZZ	J038635.D	05/28/08	13:33	04:44	(unrelated sample)
F57610-7MS	J038636.D	05/28/08	13:58	05:09	Matrix Spike
F57610-7MSD	J038637.D	05/28/08	14:22	05:33	Matrix Spike Duplicate
ZZZZZZ	J038638.D	05/28/08	14:49	06:00	(unrelated sample)
ZZZZZZ	J038639.D	05/28/08	15:13	06:24	(unrelated sample)
ZZZZZZ	J038640.D	05/28/08	15:38	06:49	(unrelated sample)
ZZZZZZ	J038641.D	05/28/08	16:02	07:13	(unrelated sample)
ZZZZZZ	J038642.D	05/28/08	16:26	07:37	(unrelated sample)
ZZZZZZ	J038643.D	05/28/08	16:51	08:02	(unrelated sample)
ZZZZZZ	J038644.D	05/28/08	17:15	08:26	(unrelated sample)
ZZZZZZ	J038645.D	05/28/08	17:39	08:50	(unrelated sample)
ZZZZZZ	J038646.D	05/28/08	18:04	09:15	(unrelated sample)
ZZZZZZ	J038647.D	05/28/08	18:29	09:40	(unrelated sample)
ZZZZZZ	J038648.D	05/28/08	18:53	10:04	(unrelated sample)
ZZZZZZ	J038649.D	05/28/08	19:17	10:28	(unrelated sample)
ZZZZZZ	J038650.D	05/28/08	19:42	10:53	(unrelated sample)

## Instrument Performance Check (BFB)

Page 2 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2475-BFB

Injection Date: 05/28/08

Lab File ID: J038626.D

Injection Time: 08:49

Instrument ID: GCMSJ

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	J038651.D	05/28/08	20:06	11:17	(unrelated sample)

5.4

5

## Continuing Calibration Summary

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2475-CC2474  
 Lab FileID: J038627.D

Page 1 of 3

## Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\052808\J038627.D Vial: 7  
 Acq On : 28 May 2008 9:45 am Operator: JuanG  
 Sample : cc2474-4 Inst : MSVOA6  
 Misc : ms9891,vj2475,,,,, Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\8260-JAPP9.M (RTE Integrator)  
 Title : SW-846 Method 5030B/8260B & EPA 624  
 Last Update : Wed May 28 13:22:02 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Fluorobenzene	1.000	1.000	0.0	105	0.00	7.63
2	Dichlorodifluoromethane	0.176	0.192	-9.1	112	0.02	2.86
3 P	Chloromethane	0.579	0.606	-4.7	111	0.00	3.08
4 C	Vinyl Chloride	0.502	0.543	-8.2	109	0.00	3.20
5	Bromomethane	0.315	0.370	-17.5	123	0.00	3.61
6	Chloroethane	0.304	0.370	-21.7#	132	0.00	3.71
7	Trichlorofluoromethane	0.424	0.498	-17.5	130	0.00	3.91
8	Ethyl Ether	0.459	0.482	-5.0	98	0.00	4.14
9	1,2-Dichlorotrifluoroetha	0.533	0.539	-1.1	101	0.00	4.40
10 C	1,1-Dichloroethene	0.577	0.607	-5.2	104	0.00	4.43
11	Freon 113	0.385	0.385	0.0	107	0.00	4.48
12	Carbon Disulfide	1.469	1.493	-1.6	108	0.02	4.52
13	Iodomethane	0.668	0.742	-11.1	110	0.00	4.61
14	Allyl chloride	0.590	0.633	-7.3	109	0.00	4.90
----- Amount Calc. %Drift -----							
15	Methylene Chloride	40.000	40.989	-2.5	107	0.01	5.04
----- AvgRF CCRF %Dev -----							
16	Acetone	0.368	0.354	3.8	108	-0.01	5.16
17	Methyl acetate	0.051	0.051	0.0	108	0.00	5.16
18	trans-1,2-Dichloroethene	0.422	0.440	-4.3	110	0.00	5.18
19	Hexane	0.303	0.314	-3.6	110	0.00	5.24
20	Methyl Tert Butyl Ether	0.756	0.787	-4.1	109	0.00	5.31
21	Acetonitrile	0.025	0.026	-4.0	110	-0.06	5.58
22	Di-isopropyl ether	1.178	1.231	-4.5	109	0.00	5.65
23	Chloroprene	0.421	0.451	-7.1	112	0.00	5.80
24 P	1,1-Dichloroethane	0.534	0.556	-4.1	110	0.00	5.82
25	Acrylonitrile	0.122	0.127	-4.1	106	-0.01	5.87
26	ETBE	0.978	1.026	-4.9	107	0.00	6.04
27	Vinyl acetate	0.722	0.786	-8.9	104	0.00	6.03
28	cis-1,2-Dichloroethene	0.302	0.316	-4.6	111	0.00	6.37
29	2,2-Dichloropropane	0.355	0.379	-6.8	111	0.00	6.51
30	Bromochloromethane	0.177	0.186	-5.1	113	0.00	6.58
31	Cyclohexane	0.567	0.615	-8.5	112	0.00	6.62
32 C	Chloroform	0.489	0.505	-3.3	110	0.00	6.63
33	Ethyl acetate	0.403	0.418	-3.7	104	0.00	6.71
----- Amount Calc. %Drift -----							
34	Tetrahydrofuran	40.000	41.823	-4.6	110	0.00	6.81
----- AvgRF CCRF %Dev -----							

# Continuing Calibration Summary

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2475-CC2474  
Lab FileID: J038627.D

Page 2 of 3

35 S	Dibromofluoromethane	0.246	0.247	-0.4	107	0.00	6.82
36	Carbon Tetrachloride	0.301	0.313	-4.0	107	0.00	6.81
37	1,1,1-Trichloroethane	0.351	0.369	-5.1	111	0.00	6.87
38	2-Butanone	0.173	0.181	-4.6	107	-0.01	6.93
39	1,1-Dichloropropene	0.379	0.403	-6.3	110	0.00	6.98
40	Propionitrile	0.052	0.054	-3.8	106	-0.02	7.24
41	Methacrylonitrile	0.251	0.287	-14.3	112	0.00	7.26
42	Benzene	1.245	1.332	-7.0	110	0.00	7.24
43	TAME	0.749	0.764	-2.0	104	0.00	7.32
44 S	1,2-Dichloroethane-d4	0.270	0.285	-5.6	104	0.00	7.36
45	1,2-Dichloroethane	0.362	0.361	0.3	107	0.00	7.43
46	Trichloroethene	0.300	0.318	-6.0	111	0.00	7.80
<hr/>							
47	Methylcyclohexane	40.000	41.471	-3.7	111	0.00	7.81
<hr/>							
		AvgRF	CCRF	%Dev			
48	Dibromomethane	0.174	0.178	-2.3	105	0.00	8.22
49 C	1,2-Dichloropropane	0.346	0.367	-6.1	109	0.00	8.31
50	Bromodichloromethane	0.363	0.383	-5.5	108	0.00	8.35
51	Methyl methacrylate	0.301	0.318	-5.6	101	0.00	8.46
52	2-Chloroethyl vinyl ether	0.068	0.075	-10.3	82	0.00	8.87
53	cis-1,3-Dichloropropene	0.471	0.506	-7.4	109	0.00	8.96
<hr/>							
54 I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00	10.69
55 S	Toluene-d8	1.217	1.181	3.0	106	0.00	9.15
56 C	Toluene	1.379	1.419	-2.9	109	0.00	9.21
57	2-Nitropropane	0.076	0.079	-3.9	106	0.00	9.42
58	4-Methyl-2-pentanone	0.387	0.402	-3.9	103	0.00	9.54
59	trans-1,3-Dichloropropene	0.485	0.505	-4.1	106	0.00	9.59
60	Tetrachloroethene	0.352	0.363	-3.1	112	0.00	9.59
61	Ethyl methacrylate	0.440	0.466	-5.9	104	0.00	9.71
62	1,1,2-Trichloroethane	0.279	0.273	2.2	105	0.00	9.76
63	Dibromochloromethane	0.314	0.325	-3.5	110	0.00	9.94
64	1,3-Dichloropropane	0.548	0.558	-1.8	107	0.00	10.04
65	1,2-Dibromoethane	0.302	0.313	-3.6	108	0.00	10.21
66	2-hexanone	0.263	0.285	-8.4	104	0.00	10.36
<hr/>							
67	1-Chlorohexane	40.000	41.320	-3.3	112	0.00	10.65
<hr/>							
		AvgRF	CCRF	%Dev			
68 C	Ethylbenzene	1.569	1.652	-5.3	109	0.00	10.71
69 P	Chlorobenzene	0.980	1.017	-3.8	109	0.00	10.71
70	1,1,1,2-Tetrachloroethane	0.300	0.307	-2.3	107	0.00	10.76
71	m,p-Xylene	1.072	1.206	-12.5	108	0.00	10.85
72	o-Xylene	1.087	1.195	-9.9	109	0.00	11.29
<hr/>							
73	Styrene	40.000	40.813	-2.0	109	0.00	11.34
<hr/>							
		AvgRF	CCRF	%Dev			
74 P	Bromoform	0.210	0.224	-6.7	106	0.00	11.39
75	Isopropylbenzene	1.166	1.295	-11.1	109	0.00	11.60
<hr/>							
76 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	13.05
77 S	4-Bromofluorobenzene	0.881	0.868	1.5	109	0.00	11.90
78	cis-1,4-Dichloro-2-butene	0.157	0.134	14.6	83	0.00	11.95
79	n-Propylbenzene	3.313	3.565	-7.6	108	0.00	12.02
80	Bromobenzene	0.793	0.809	-2.0	111	0.00	12.02

5.7  
5

## Continuing Calibration Summary

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Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: VJ2475-CC2474  
 Lab FileID: J038627.D

81 P	1,1,2,2-Tetrachloroethane	0.800	0.776	3.0	105	0.00	12.07
82	1,3,5-Trimethylbenzene	2.180	2.375	-8.9	110	0.00	12.20
83	2-Chlorotoluene	2.217	2.376	-7.2	109	0.00	12.20
84	trans-1,4-Dichloro-2-Bute	0.155	0.127	18.1	82	0.00	12.26
85	1,2,3-Trichloropropane	0.207	0.194	6.3	105	0.00	12.24
86	Cyclohexanone	0.017	0.017	0.0	108	-0.01	12.30
87	4-Chlorotoluene	1.869	1.961	-4.9	109	0.00	12.37
88	tert-Butylbenzene	1.175	1.247	-6.1	110	0.00	12.54
89	1,2,4-Trimethylbenzene	2.127	2.268	-6.6	109	0.00	12.61
90	Pentachloroethane	0.440	0.447	-1.6	107	0.00	12.58
91	sec-Butylbenzene	2.659	2.890	-8.7	109	0.00	12.72
92	4-Isopropyltoluene	2.100	2.283	-8.7	109	0.00	12.86
93	1,3-Dichlorobenzene	1.295	1.332	-2.9	110	0.00	12.98
94	1,4-Dichlorobenzene	1.412	1.427	-1.1	109	0.00	13.06
----- Amount Calc. %Drift -----							
95	n-Butylbenzene	40.000	39.979	0.1	109	0.00	13.30
96	Benzyl Chloride	40.000	39.784	0.5	107	0.00	13.31
----- AvgRF CCRF %Dev -----							
97	1,2-Dichlorobenzene	1.243	1.285	-3.4	109	0.00	13.50
98	1,2-Dibromo-3-Chloropropa	0.103	0.102	1.0	103	0.00	14.25
99	Hexachlorobutadiene	0.381	0.399	-4.7	116	0.00	14.80
----- Amount Calc. %Drift -----							
100	1,2,4-Trichlorobenzene	40.000	39.939	0.2	114	0.00	14.84
101	Naphthalene	40.000	39.272	1.8	108	0.00	15.13
102	1,2,3-Trichlorobenzene	40.000	39.620	1.0	112	0.00	15.29
----- AvgRF CCRF %Dev -----							
103 I	Tert Butyl Alcohol-d10	1.000	1.000	0.0	112	-0.09	5.30
104	Ethanol	0.417	0.235	43.6#	100	0.05	4.40
105	acrolein	0.716	0.604	15.6	97	-0.02	4.74
----- Amount Calc. %Drift -----							
106	Tert Butyl Alcohol	400.000	382.354	4.4	106	-0.09	5.38
----- AvgRF CCRF %Dev -----							
107	tert Amyl alcohol	0.937	0.901	3.8	99	-0.04	7.48
----- Amount Calc. %Drift -----							
108	Isobutyl alcohol	800.000	862.957	-7.9	113	-0.04	7.36
109	1,4-Dioxane	800.000	810.252	-1.3	116	-0.18	8.57

(#) = Out of Range  
 J038601.D 8260-JAPP9.M

SPCC's out = 0 CCC's out = 0  
 Thu May 29 12:31:51 2008

5.7  
5

# Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Check Std: VG1912-CC1901

Injection Date: 05/19/08

Lab File ID: G0050452.D

Injection Time: 09:54

Instrument ID: GCMSG

Method: SW846 8260B

	IS 1		IS 2		IS 3		IS 4	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	933036	11.25	668667	14.82	386724	17.09	158487	8.13
Upper Limit <sup>a</sup>	1866072	11.75	1337334	15.32	773448	17.59	316974	8.63
Lower Limit <sup>b</sup>	466518	10.75	334334	14.32	193362	16.59	79244	7.63

Lab	IS 1		IS 2		IS 3		IS 4	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT
VG1912-BS	944868	11.25	694752	14.83	392045	17.08	161354	8.14
VG1912-MB	899159	11.25	681955	14.82	363625	17.08	103778	8.14
ZZZZZZ	964147	11.25	677332	14.82	363223	17.08	103528	8.15
ZZZZZZ	918533	11.25	669411	14.82	372650	17.08	93007	8.14
ZZZZZZ	874764	11.25	613550	14.83	366164	17.09	109261	8.15
ZZZZZZ	901610	11.25	649895	14.82	332860	17.08	108319	8.15
ZZZZZZ	900683	11.25	659841	14.82	345203	17.08	123131	8.14
ZZZZZZ	907556	11.25	659604	14.82	348687	17.08	116326	8.15
F57493-14	871249	11.25	630993	14.82	331814	17.08	97114	8.15
ZZZZZZ	863933	11.25	600958	14.83	276012	17.09	95387	8.15
F57525-2	906273	11.25	626053	14.82	317945	17.09	67907*	8.14
F57525-4	904904	11.25	640647	14.83	334446	17.09	85781	8.15
ZZZZZZ	952654	11.25	687649	14.82	379736	17.09	114080	8.16
F57493-14MS	927180	11.25	614218	14.83	352367	17.08	68047*	8.15
F57493-14MSD	889248	11.25	624283	14.83	331529	17.08	69117*	8.15
ZZZZZZ	893121	11.25	612008	14.83	320024	17.08	112906	8.17
ZZZZZZ	879684	11.25	630812	14.83	350581	17.08	130860	8.16
ZZZZZZ	832073	11.25	607567	14.83	314087	17.09	114178	8.16
ZZZZZZ	838216	11.25	601827	14.83	311011	17.08	115135	8.17
ZZZZZZ	828108	11.25	564594	14.83	233467	17.08	106800	8.16
ZZZZZZ	873533	11.25	609895	14.83	315686	17.09	96798	8.15
ZZZZZZ	828577	11.25	593607	14.83	303744	17.09	108549	8.16
ZZZZZZ	833052	11.25	564789	14.83	227346	17.09	89538	8.15

IS 1 = Fluorobenzene

IS 2 = Chlorobenzene-D5

IS 3 = 1,4-Dichlorobenzene-d4

IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	VJ2475-CC2474	Injection Date:	05/28/08
Lab File ID:	J038627.D	Injection Time:	09:45
Instrument ID:	GCMSJ	Method:	SW846 8260B

	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT
	AREA		AREA		AREA		AREA	
Check Std	2401050	7.63	2108966	10.69	1142156	13.05	233262	5.30
Upper Limit <sup>a</sup>	4802100	8.13	4217932	11.19	2284312	13.55	466524	5.80
Lower Limit <sup>b</sup>	1200525	7.13	1054483	10.19	571078	12.55	116631	4.80

Lab Sample ID	IS 1	RT	IS 2	RT	IS 3	RT	IS 4	RT
	AREA		AREA		AREA		AREA	
VJ2475-BS	2468598	7.63	2123288	10.69	1144281	13.05	250662	5.38
VJ2475-MB	2163465	7.62	1678055	10.69	770572	13.05	202083	5.39
F57525-1	2053692	7.62	1698346	10.69	882260	13.05	283647	5.34
F57525-3	2130744	7.61	1635485	10.69	794839	13.05	230973	5.32
ZZZZZZ	2070039	7.62	1621508	10.69	741365	13.05	175923	5.34
ZZZZZZ	1919026	7.63	1519231	10.69	705013	13.05	176823	5.38
F57610-7	1868524	7.63	1488791	10.69	680892	13.05	175820	5.39
ZZZZZZ	1812663	7.62	1453195	10.69	663945	13.05	175650	5.34
F57610-7MS	2028078	7.62	1674552	10.69	927943	13.05	185350	5.39
F57610-7MSD	2186122	7.62	1826644	10.69	986275	13.05	189616	5.39
ZZZZZZ	1983377	7.62	1583835	10.69	720868	13.05	189700	5.39
ZZZZZZ	1877137	7.62	1470323	10.69	670671	13.05	157005	5.37
ZZZZZZ	1853748	7.63	1480059	10.69	677153	13.05	159926	5.31
ZZZZZZ	1774306	7.63	1408868	10.69	653694	13.05	163880	5.38
ZZZZZZ	1737316	7.62	1369870	10.69	629649	13.05	165408	5.36
ZZZZZZ	1703824	7.63	1365394	10.69	633913	13.05	159704	5.39
ZZZZZZ	1676081	7.62	1317895	10.69	614775	13.05	162960	5.39
ZZZZZZ	2247196	7.62	1827389	10.69	902045	13.05	214516	5.51
ZZZZZZ	2197168	7.61	1788748	10.69	860764	13.05	203006	5.56
ZZZZZZ	2253246	7.61	1778703	10.69	842059	13.05	171315	5.42
ZZZZZZ	2318633	7.62	2010560	10.69	1133436	13.05	175653	5.41
ZZZZZZ	2458003	7.61	2148467	10.69	1234129	13.05	199833	5.40
ZZZZZZ	2654637	7.61	2317439	10.69	1302118	13.05	236691	5.39
ZZZZZZ	2739631	7.61	2176245	10.69	995025	13.05	234217	5.39

IS 1 = Fluorobenzene  
IS 2 = Chlorobenzene-D5  
IS 3 = 1,4-Dichlorobenzene-d4  
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: SW846 8270C BY SIM

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
F57525-1	W040640.D	54.0	46.0	60.0
F57525-3	W040641.D	64.0	64.0	71.0
OP25106-BS	W040625.D	69.0	60.0	69.0
OP25106-MB	W040624.D	62.0	53.0	68.0
OP25106-MB	W040672.D	57.0	60.0	66.0
OP25106-MS	W040629.D	60.0	52.0	63.0
OP25106-MSD	W040630.D	62.0	62.0	65.0

Surrogate  
Compounds

Recovery  
Limits

S1 = Nitrobenzene-d5

42-108%

S2 = 2-Fluorobiphenyl

40-106%

S3 = Terphenyl-d14

39-121%

7.6

7



# Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: SW846 8270C BY SIM

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
F57525-2	R13873.D	67.0	71.0	89.0
F57525-4	R13889.D	81.0	83.0	84.0
OP25149-BS	R13856.D	80.0	80.0	93.0
OP25149-MB	R13857.D	81.0 <sup>a</sup>	77.0 <sup>a</sup>	96.0 <sup>a</sup>
OP25149-MB	R13888.D	83.0 <sup>a</sup>	80.0 <sup>a</sup>	91.0 <sup>a</sup>
OP25149-MS	R13869.D	63.0	74.0	83.0
OP25149-MSD	R13870.D	65.0	75.0	91.0

Surrogate  
Compounds

Recovery  
Limits

S1 = Nitrobenzene-d5	40-105%
S2 = 2-Fluorobiphenyl	43-107%
S3 = Terphenyl-d14	45-119%

(a) Surrogate recoveries corrected for actual spike amount.

7.6

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## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MS	W040629.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
OP25106-MSD	W040630.D	1	05/20/08	RB	05/19/08	OP25106	SW2081
F57485-3	W040628.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-1, F57525-3

CAS No.	Compound	F57485-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	0.96 U		48.1	29.7	62	30.8	64	4	60-94/25
208-96-8	Acenaphthylene	0.96 U		48.1	30.3	63	31.5	66	4	60-92/24
120-12-7	Anthracene	0.96 U		48.1	32.9	68*	34.3	71	4	69-98/19
56-55-3	Benzo(a)anthracene	0.19 U		4.81	3.5	73	3.6	75	3	65-102/23
50-32-8	Benzo(a)pyrene	0.19 U		4.81	3.8	79	3.8	79	0	74-106/23
205-99-2	Benzo(b)fluoranthene	0.19 U		4.81	3.6	75	3.7	77	3	71-104/24
191-24-2	Benzo(g,h,i)perylene	0.19 U		4.81	3.4	71	3.4	71	0	60-104/22
207-08-9	Benzo(k)fluoranthene	0.19 U		4.81	3.5	73	3.6	75	3	70-104/22
218-01-9	Chrysene	0.19 U		4.81	3.5	73	3.6	75	3	69-104/21
53-70-3	Dibenzo(a,h)anthracene	0.19 U		4.81	3.5	73	3.5	73	0	63-107/21
206-44-0	Fluoranthene	0.96 U		48.1	34.6	72	35.2	73	2	70-99/23
86-73-7	Fluorene	0.96 U		48.1	32.3	67	33.4	69	3	62-95/25
193-39-5	Indeno(1,2,3-cd)pyrene	0.19 U		4.81	3.5	73	3.5	73	0	63-107/24
90-12-0	1-Methylnaphthalene	0.96 U		48.1	29.3	61	30.3	63	3	57-94/26
91-57-6	2-Methylnaphthalene	0.96 U		48.1	27.4	57*	28.1	58	3	58-90/23
91-20-3	Naphthalene	0.96 U		48.1	28.7	60	29.4	61	2	58-92/23
85-01-8	Phenanthrene	0.96 U		48.1	31.4	65*	32.7	68	4	68-98/23
129-00-0	Pyrene	0.96 U		48.1	32.7	68	33.8	70	3	66-102/25

CAS No.	Surrogate Recoveries	MS	MSD	F57485-3	Limits
4165-60-0	Nitrobenzene-d5	60%	62%	71%	42-108%
321-60-8	2-Fluorobiphenyl	52%	62%	61%	40-106%
1718-51-0	Terphenyl-d14	63%	65%	75%	39-121%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25149-MS	R13869.D	4	05/23/08	RB	05/22/08	OP25149	SR643
OP25149-MSD	R13870.D	4	05/23/08	RB	05/22/08	OP25149	SR643
F57653-4	R13878.D	4	05/23/08	RB	05/22/08	OP25149	SR643

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-2, F57525-4

CAS No.	Compound	F57653-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	320 U		1000	778	78	838	83	7	61-97/27
208-96-8	Acenaphthylene	320 U		1000	782	78	828	82	6	61-95/29
120-12-7	Anthracene	320 U		1000	793	79	885	88	11	64-100/24
56-55-3	Benzo(a)anthracene	64 U		100	75.6	76	88.8	88	16	63-106/35
50-32-8	Benzo(a)pyrene	64 U		100	78.4	78	91.0	90	15	69-107/33
205-99-2	Benzo(b)fluoranthene	64 U		100	81.3	81	95.1	94	16	69-107/32
191-24-2	Benzo(g,h,i)perylene	64 U		100	65.7	66	74.4	74	12	56-110/37
207-08-9	Benzo(k)fluoranthene	64 U		100	78.2	78	90.5	90	15	64-109/34
218-01-9	Chrysene	64 U		100	77.8	78	91.7	91	16	64-108/34
53-70-3	Dibenzo(a,h)anthracene	64 U		100	64.4	64	76.7	76	17	58-113/38
206-44-0	Fluoranthene	320 U		1000	778	78	909	90	16	64-104/33
86-73-7	Fluorene	320 U		1000	774	77	854	84	10	61-99/28
193-39-5	Indeno(1,2,3-cd)pyrene	64 U		100	65.0	65	75.0	74	14	59-113/34
90-12-0	1-Methylnaphthalene	320 U		1000	799	80	857	85	7	58-98/30
91-57-6	2-Methylnaphthalene	320 U		1000	721	72	773	76	7	57-95/31
91-20-3	Naphthalene	320 U		1000	767	77	827	82	8	58-94/31
85-01-8	Phenanthrene	320 U		1000	771	77	870	86	12	65-100/33
129-00-0	Pyrene	320 U		1000	889	89	991	98	11	62-107/37

CAS No.	Surrogate Recoveries	MS	MSD	F57653-4	Limits
4165-60-0	Nitrobenzene-d5	63%	65%	77%	40-105%
321-60-8	2-Fluorobiphenyl	74%	75%	81%	43-107%
1718-51-0	Terphenyl-d14	83%	91%	88%	45-119%

## Blank Spike Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-BS	W040625.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-1, F57525-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	25	17.5	70	60-94
208-96-8	Acenaphthylene	25	18.2	73	60-92
120-12-7	Anthracene	25	18.8	75	69-98
56-55-3	Benzo(a)anthracene	2.5	1.9	76	65-102
50-32-8	Benzo(a)pyrene	2.5	2.0	80	74-106
205-99-2	Benzo(b)fluoranthene	2.5	2.0	80	71-104
191-24-2	Benzo(g,h,i)perylene	2.5	1.9	76	60-104
207-08-9	Benzo(k)fluoranthene	2.5	1.9	76	70-104
218-01-9	Chrysene	2.5	1.9	76	69-104
53-70-3	Dibenzo(a,h)anthracene	2.5	1.9	76	63-107
206-44-0	Fluoranthene	25	19.2	77	70-99
86-73-7	Fluorene	25	18.9	76	62-95
193-39-5	Indeno(1,2,3-cd)pyrene	2.5	1.9	76	63-107
90-12-0	1-Methylnaphthalene	25	17.1	68	57-94
91-57-6	2-Methylnaphthalene	25	16.0	64	58-90
91-20-3	Naphthalene	25	16.8	67	58-92
85-01-8	Phenanthrene	25	18.0	72	68-98
129-00-0	Pyrene	25	18.6	74	66-102

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	69%	42-108%
321-60-8	2-Fluorobiphenyl	60%	40-106%
1718-51-0	Terphenyl-d14	69%	39-121%

7.2

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## Blank Spike Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25149-BS	R13856.D	1	05/23/08	RB	05/22/08	OP25149	SR643

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-2, F57525-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	833	684	82	61-97
208-96-8	Acenaphthylene	833	685	82	61-95
120-12-7	Anthracene	833	715	86	64-100
56-55-3	Benzo(a)anthracene	83.3	73.6	88	63-106
50-32-8	Benzo(a)pyrene	83.3	76.4	92	69-107
205-99-2	Benzo(b)fluoranthene	83.3	82.0	98	69-107
191-24-2	Benzo(g,h,i)perylene	83.3	61.1	73	56-110
207-08-9	Benzo(k)fluoranthene	83.3	75.2	90	64-109
218-01-9	Chrysene	83.3	73.7	88	64-108
53-70-3	Dibenzo(a,h)anthracene	83.3	62.3	75	58-113
206-44-0	Fluoranthene	833	715	86	64-104
86-73-7	Fluorene	833	702	84	61-99
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	63.5	76	59-113
90-12-0	1-Methylnaphthalene	833	716	86	58-98
91-57-6	2-Methylnaphthalene	833	644	77	57-95
91-20-3	Naphthalene	833	666	80	58-94
85-01-8	Phenanthrene	833	693	83	65-100
129-00-0	Pyrene	833	811	97	62-107

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	80%	40-105%
321-60-8	2-Fluorobiphenyl	80%	43-107%
1718-51-0	Terphenyl-d14	93%	45-119%

## Method Blank Summary

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Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MB	W040624.D	1	05/20/08	RB	05/19/08	OP25106	SW2081

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	62% 42-108%
321-60-8	2-Fluorobiphenyl	53% 40-106%
1718-51-0	Terphenyl-d14	68% 39-121%

## Method Blank Summary

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Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25106-MB	W040672.D	1	05/21/08	RB	05/19/08	OP25106	SW2082

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.50	ug/l	
208-96-8	Acenaphthylene	ND	1.0	0.50	ug/l	
120-12-7	Anthracene	ND	1.0	0.50	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.20	0.050	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.20	0.10	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.10	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.10	ug/l	
218-01-9	Chrysene	ND	0.20	0.10	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.050	ug/l	
206-44-0	Fluoranthene	ND	1.0	0.25	ug/l	
86-73-7	Fluorene	ND	1.0	0.25	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.050	ug/l	
90-12-0	1-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-57-6	2-Methylnaphthalene	ND	1.0	0.25	ug/l	
91-20-3	Naphthalene	ND	1.0	0.25	ug/l	
85-01-8	Phenanthrene	ND	1.0	0.50	ug/l	
129-00-0	Pyrene	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	57% 42-108%
321-60-8	2-Fluorobiphenyl	60% 40-106%
1718-51-0	Terphenyl-d14	66% 39-121%

## Method Blank Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25149-MB	R13857.D	1	05/23/08	RB	05/22/08	OP25149	SR643

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-2, F57525-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	17	ug/kg	
208-96-8	Acenaphthylene	ND	67	17	ug/kg	
120-12-7	Anthracene	ND	67	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	13	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	3.3	ug/kg	
218-01-9	Chrysene	ND	13	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	3.3	ug/kg	
206-44-0	Fluoranthene	ND	67	12	ug/kg	
86-73-7	Fluorene	ND	67	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	ND	67	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	10	ug/kg	
91-20-3	Naphthalene	ND	67	10	ug/kg	
85-01-8	Phenanthrene	ND	67	10	ug/kg	
129-00-0	Pyrene	ND	67	12	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	81% <sup>a</sup> 40-105%
321-60-8	2-Fluorobiphenyl	77% <sup>a</sup> 43-107%
1718-51-0	Terphenyl-d14	96% <sup>a</sup> 45-119%

(a) Surrogate recoveries corrected for actual spike amount.



## Method Blank Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25149-MB	R13888.D	1	05/26/08	RB	05/22/08	OP25149	SR644

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

F57525-2, F57525-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	67	17	ug/kg	
208-96-8	Acenaphthylene	ND	67	17	ug/kg	
120-12-7	Anthracene	ND	67	10	ug/kg	
56-55-3	Benzo(a)anthracene	ND	13	3.3	ug/kg	
50-32-8	Benzo(a)pyrene	ND	13	3.3	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	13	3.3	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	13	3.3	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	13	3.3	ug/kg	
218-01-9	Chrysene	ND	13	3.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	13	3.3	ug/kg	
206-44-0	Fluoranthene	ND	67	12	ug/kg	
86-73-7	Fluorene	ND	67	10	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	13	3.3	ug/kg	
90-12-0	1-Methylnaphthalene	ND	67	10	ug/kg	
91-57-6	2-Methylnaphthalene	ND	67	10	ug/kg	
91-20-3	Naphthalene	ND	67	10	ug/kg	
85-01-8	Phenanthrene	ND	67	10	ug/kg	
129-00-0	Pyrene	ND	67	12	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	83% <sup>a</sup> 40-105%
321-60-8	2-Fluorobiphenyl	80% <sup>a</sup> 43-107%
1718-51-0	Terphenyl-d14	91% <sup>a</sup> 45-119%

(a) Surrogate recoveries corrected for actual spike amount.

## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SR642-DFTPP Injection Date: 05/22/08  
 Lab File ID: R13825.D Injection Time: 12:50  
 Instrument ID: GCMSR

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	139911	35.5	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	154574	39.2	Pass
70	Less than 2.0% of mass 69	800	0.2 (0.52) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	173625	44.1	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	393963	100.0	Pass
199	5.0 - 9.0% of mass 198	25806	6.6	Pass
275	10.0 - 30.0% of mass 198	115884	29.4	Pass
365	1.0 - 100.0% of mass 198	13893	3.5	Pass
441	Present, but less than mass 443	58187	14.8 (84.1) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	367627	93.3	Pass
443	17.0 - 23.0% of mass 442	69192	17.6 (18.8) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR642-IC642	R13826.D	05/22/08	13:07	00:17	Initial cal 1
SR642-IC642	R13827.D	05/22/08	13:33	00:43	Initial cal 2
SR642-IC642	R13828.D	05/22/08	14:00	01:10	Initial cal 3
SR642-ICC642	R13829.D	05/22/08	14:27	01:37	Initial cal 4
SR642-IC642	R13830.D	05/22/08	14:54	02:04	Initial cal 5
SR642-IC642	R13831.D	05/22/08	15:20	02:30	Initial cal 6
SR642-IC642	R13832.D	05/22/08	15:47	02:57	Initial cal 7
SR642-ICV642	R13833.D	05/22/08	16:14	03:24	Initial cal verification 4
OP25145-BS	R13834.D	05/22/08	16:49	03:59	Blank Spike
OP25145-MB	R13835.D	05/22/08	17:15	04:25	Method Blank
ZZZZZZ	R13837.D	05/22/08	18:19	05:29	(unrelated sample)
F57666-2	R13838.D	05/22/08	18:46	05:56	(used for QC only; not part of job F57525)
OP25145-MS	R13839.D	05/22/08	19:16	06:26	Matrix Spike
OP25145-MSD	R13840.D	05/22/08	19:42	06:52	Matrix Spike Duplicate
ZZZZZZ	R13844.D	05/22/08	21:35	08:45	(unrelated sample)
ZZZZZZ	R13847.D	05/22/08	22:54	10:04	(unrelated sample)
ZZZZZZ	R13849.D	05/22/08	23:47	10:57	(unrelated sample)

## Initial Calibration Summary

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SR642-ICC642  
 Lab FileID: R13829.D

## Response Factor Report MSBNA3

Method : C:\msdchem\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu May 22 18:38:48 2008  
 Response via : Initial Calibration

## Calibration Files

L1 =R13826.D L2 =R13827.D L3 =R13828.D L4 =R13829.D  
 L5 =R13830.D L6 =R13831.D L7 =R13832.D icv =R13833.D

Compound	L1	L2	L3	L4	L5	L6	L7	icv	Avg %RSD
1) I Naphthalene-d8	-----ISTD-----								
2) Nitrobenzene	0.350	0.360	0.376	0.393	0.399	0.388	0.383	0.378	4.75
3) N-nitroso-di		0.125	0.124	0.131	0.128	0.130	0.129	0.128	2.06
4) Naphthalene	1.195	1.225	1.235	1.260	1.245	1.083	1.017	1.180	7.90
5) 2-Methylnaph	0.759	0.775	0.796	0.823	0.822	0.760	0.722	0.779	4.70
6) 1-Methylnaph	0.676	0.708	0.718	0.754	0.755	0.704	0.668	0.712	4.79
7) I Acenaphthene-d10	-----ISTD-----								
8) Hexachlorocy		0.189	0.259	0.335	0.362	0.353	0.351	0.308	22.51
9) 2-Fluorobiph	1.734	1.801	1.807	1.899	1.969	1.849	1.795	1.836	4.21
10) Acenaphthyle	2.363	2.396	2.436	2.536	2.571	2.306	2.141	2.393	6.06
11) Acenaphthene	1.439	1.472	1.490	1.552	1.586	1.449	1.401	1.484	4.38
12) 2,4-Dinitrop		0.043	0.078	0.156	0.181	0.212	0.251	0.154	51.67
13) 4-Nitropheno		0.238	0.272	0.315	0.319	0.321	0.333	0.300	12.24
14) Fluorene	1.516	1.558	1.595	1.644	1.676	1.552	1.496	1.577	4.17
15) I Phenanthrene-d10	-----ISTD-----								
16) Phenanthrene	1.379	1.420	1.440	1.494	1.517	1.383	1.331	1.423	4.64
17) Anthracene	1.383	1.432	1.475	1.541	1.549	1.405	1.346	1.447	5.38
18) Carbazole	1.156	1.200	1.214	1.219	1.118	0.953	0.932	1.113	10.97
19) Fluoranthene	1.387	1.456	1.481	1.548	1.567	1.433	1.383	1.465	4.93
20) I Chrysene-d12	-----ISTD-----								
21) Pyrene	1.897	1.960	2.059	2.087	2.127	1.967	1.837	1.991	5.28
22) Terphenyl-d1	0.933	0.959	1.020	1.061	1.088	1.036	0.989	1.012	5.49
23) Benzo[a]anth	1.605	1.571	1.574	1.654	1.695	1.656	1.630	1.627	2.82
24) Chrysene	1.446	1.490	1.516	1.622	1.655	1.618	1.579	1.561	4.99
25) I Perylene-d12	-----ISTD-----								
26) Benzo[b]fluo	1.348	1.335	1.403	1.493	1.565	1.572	1.524	1.463	6.84
27) Benzo[k]fluo	1.381	1.445	1.524	1.637	1.703	1.660	1.649	1.571	7.80
28) Benzo[a]pyre	1.231	1.248	1.290	1.393	1.446	1.430	1.415	1.350	6.75
29) Indeno[1,2,3	1.139	1.151	1.184	1.247	1.307	1.280	1.287	1.228	5.62
30) Dibenz[a,h]a	1.089	1.096	1.145	1.227	1.284	1.270	1.269	1.197	7.13
31) Benzo[g,h,i]	1.316	1.346	1.364	1.430	1.496	1.457	1.442	1.407	4.67

(#) = Out of Range ### Number of calibration levels exceeded format ###

SIM\_PAHC.M

Thu May 22 18:39:37 2008

## Instrument Performance Check (DFTPP)

Page 1 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SR643-DFTPP

Injection Date: 05/23/08

Lab File ID: R13854.D

Injection Time: 10:45

Instrument ID: GCMSR

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	65952	42.2	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	71389	45.7	Pass
70	Less than 2.0% of mass 69	207	0.13 (0.29) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	73912	47.3	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	156322	100.0	Pass
199	5.0 - 9.0% of mass 198	10143	6.5	Pass
275	10.0 - 30.0% of mass 198	42952	27.5	Pass
365	1.0 - 100.0% of mass 198	4801	3.1	Pass
441	Present, but less than mass 443	18554	11.9 (76.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	119877	76.7	Pass
443	17.0 - 23.0% of mass 442	24288	15.5 (20.3) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR643-CC642	R13855.D	05/23/08	11:02	00:17	Continuing cal 4
OP25149-BS	R13856.D	05/23/08	11:43	00:58	Blank Spike
OP25149-MB	R13857.D	05/23/08	12:10	01:25	Method Blank
ZZZZZZ	R13859.D	05/23/08	13:11	02:26	(unrelated sample)
ZZZZZZ	R13860.D	05/23/08	13:40	02:55	(unrelated sample)
ZZZZZZ	R13861.D	05/23/08	14:10	03:25	(unrelated sample)
ZZZZZZ	R13862.D	05/23/08	14:37	03:52	(unrelated sample)
ZZZZZZ	R13863.D	05/23/08	15:04	04:19	(unrelated sample)
ZZZZZZ	R13864.D	05/23/08	15:31	04:46	(unrelated sample)
ZZZZZZ	R13867.D	05/23/08	17:31	06:46	(unrelated sample)
ZZZZZZ	R13868.D	05/23/08	17:58	07:13	(unrelated sample)
OP25149-MS	R13869.D	05/23/08	18:24	07:39	Matrix Spike
OP25149-MSD	R13870.D	05/23/08	18:51	08:06	Matrix Spike Duplicate
ZZZZZZ	R13871.D	05/23/08	19:18	08:33	(unrelated sample)
ZZZZZZ	R13872.D	05/23/08	19:44	08:59	(unrelated sample)
F57525-2	R13873.D	05/23/08	20:11	09:26	KWSM-SO-DRUM-2
ZZZZZZ	R13875.D	05/23/08	21:04	10:19	(unrelated sample)
ZZZZZZ	R13876.D	05/23/08	21:31	10:46	(unrelated sample)
ZZZZZZ	R13877.D	05/23/08	21:57	11:12	(unrelated sample)

## Instrument Performance Check (DFTPP)

Page 2 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SR643-DFTPP

Injection Date: 05/23/08

Lab File ID: R13854.D

Injection Time: 10:45

Instrument ID: GCMSR

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F57653-4	R13878.D	05/23/08	22:24	11:39	(used for QC only; not part of job F57525)

7.4

7

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SR643-CC642  
 Lab FileID: R13855.D

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\052308\R13855.D Vial: 2  
 Acq On : 23 May 2008 11:02 am Operator: rayb  
 Sample : cc642-4 Inst : MSBNA3  
 Misc : op25149,sr643,30.0,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Fri May 23 12:15:31 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	134	0.00	5.61
2 S	Nitrobenzene-d5	0.378	0.387	-2.4	132	0.00	4.99
3 P	N-nitroso-di-n-propylamin	0.128	0.135	-5.5	137	0.00	4.87
4	Naphthalene	1.180	1.252	-6.1	133	0.00	5.64
5	2-Methylnaphthalene	0.779	0.806	-3.5	131	0.00	6.38
6	1-Methylnaphthalene	0.712	0.744	-4.5	132	0.00	6.49
7 I	Acenaphthene-d10	1.000	1.000	0.0	130	0.00	7.76
8 P	Hexachlorocyclopentadiene	0.308	0.312	-1.3	121	0.00	6.56
9 S	2-Fluorobiphenyl	1.836	1.949	-6.2	133	0.00	6.84
10	Acenaphthylene	2.393	2.568	-7.3	132	0.00	7.56
11 C	Acenaphthene	1.484	1.572	-5.9	132	0.00	7.82
12 P	2,4-Dinitrophenol	0.154	0.190	-23.4#	159	0.02	7.94
13 P	4-Nitrophenol	0.300	0.293	2.3	121	0.00	8.10
14	Fluorene	1.577	1.654	-4.9	131	0.00	8.64
15 I	Phenanthrene-d10	1.000	1.000	0.0	128	0.00	10.22
16	Phenanthrene	1.423	1.489	-4.6	128	0.00	10.26
17	Anthracene	1.447	1.530	-5.7	127	0.00	10.36
18	Carbazole	1.113	1.215	-9.2	128	0.00	10.70
19 C	Fluoranthene	1.465	1.490	-1.7	124	0.00	12.43
20 I	Chrysene-d12	1.000	1.000	0.0	109	0.00	15.12
21	Pyrene	1.991	2.347	-17.9	123	-0.01	12.83
22 S	Terphenyl-d14	1.012	1.176	-16.2	121	0.00	13.26
23	Benzo[a]anthracene	1.627	1.680	-3.3	111	0.00	15.11
24	Chrysene	1.561	1.618	-3.7	109	0.00	15.17
25 I	Perylene-d12	1.000	1.000	0.0	91	0.00	17.63
26	Benzo[b]fluoranthene	1.463	1.643	-12.3	100	-0.01	17.01
27	Benzo[k]fluoranthene	1.571	1.684	-7.2	94	-0.02	17.06
28 C	Benzo[a]pyrene	1.350	1.418	-5.0	93	-0.02	17.53
29	Indeno[1,2,3-cd]pyrene	1.228	1.107	9.9	81	-0.02	19.20
30	Dibenz[a,h]anthracene	1.197	1.051	12.2	78	-0.02	19.26
31	Benzo[g,h,i]perylene	1.407	1.227	12.8	78	-0.01	19.55

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

R13829.D SIM\_PAHC.M

Mon May 26 19:07:10 2008

7.7  
7

**Instrument Performance Check (DFTPP)**

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SR644-DFTPP

Injection Date: 05/26/08

Lab File ID: R13880.D

Injection Time: 19:24

Instrument ID: GCMSR

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	122688	39.9	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	132098	43.0	Pass
70	Less than 2.0% of mass 69	626	0.2 (0.47) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	140600	45.8	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	307264	100.0	Pass
199	5.0 - 9.0% of mass 198	20393	6.6	Pass
275	10.0 - 30.0% of mass 198	88128	28.7	Pass
365	1.0 - 100.0% of mass 198	10106	3.3	Pass
441	Present, but less than mass 443	42111	13.7 (80.9) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	269189	87.6	Pass
443	17.0 - 23.0% of mass 442	52072	16.9 (19.3) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SR644-CC642	R13881.D	05/26/08	19:40	00:16	Continuing cal 5
OP25143-BS	R13882.D	05/26/08	20:15	00:51	Blank Spike
OP25143-MB	R13883.D	05/26/08	20:41	01:17	Method Blank
ZZZZZZ	R13884.D	05/26/08	21:08	01:44	(unrelated sample)
ZZZZZZ	R13886.D	05/26/08	22:02	02:38	(unrelated sample)
ZZZZZZ	R13887.D	05/26/08	22:28	03:04	(unrelated sample)
OP25149-MB	R13888.D	05/26/08	22:55	03:31	Method Blank
F57525-4	R13889.D	05/26/08	23:22	03:58	KWSM-SO-DRUM-4
ZZZZZZ	R13890.D	05/26/08	23:48	04:24	(unrelated sample)

## Continuing Calibration Summary

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SR644-CC642  
 Lab FileID: R13881.D

Page 1 of 1

## Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\052608\R13881.D Vial: 2  
 Acq On : 26 May 2008 7:40 pm Operator: rayb  
 Sample : cc642-5 Inst : MSBNA3  
 Misc : op25143,sr644,1000,,,1,1,water Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\msdchem\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Mon May 26 20:08:51 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	100	0.00	5.59
2 S	Nitrobenzene-d5	0.378	0.379	-0.3	95	0.00	4.97
3 P	N-nitroso-di-n-propylamin	0.128	0.129	-0.8	101	0.00	4.85
4	Naphthalene	1.180	1.182	-0.2	95	0.00	5.61
5	2-Methylnaphthalene	0.779	0.767	1.5	94	0.00	6.35
6	1-Methylnaphthalene	0.712	0.702	1.4	93	0.00	6.47
7 I	Acenaphthene-d10	1.000	1.000	0.0	101	0.00	7.73
8 P	Hexachlorocyclopentadiene	0.308	0.306	0.6	85	0.00	6.54
9 S	2-Fluorobiphenyl	1.836	1.859	-1.3	95	0.00	6.81
10	Acenaphthylene	2.393	2.370	1.0	93	0.00	7.53
11 C	Acenaphthene	1.484	1.471	0.9	94	0.00	7.79
12 P	2,4-Dinitrophenol	0.154	0.114	26.0#	64	0.00	7.90
13 P	4-Nitrophenol	0.300	0.274	8.7	87	0.00	8.06
14	Fluorene	1.577	1.535	2.7	92	0.00	8.60
15 I	Phenanthrene-d10	1.000	1.000	0.0	94	0.00	10.18
16	Phenanthrene	1.423	1.449	-1.8	90	0.00	10.23
17	Anthracene	1.447	1.482	-2.4	90	0.00	10.32
18	Carbazole	1.113	1.122	-0.8	95	0.01	10.67
19 C	Fluoranthene	1.465	1.446	1.3	87	0.02	12.39
20 I	Chrysene-d12	1.000	1.000	0.0	84	0.00	15.08
21	Pyrene	1.991	2.179	-9.4	87	-0.01	12.79
22 S	Terphenyl-d14	1.012	1.096	-8.3	85	0.00	13.22
23	Benzo[a]anthracene	1.627	1.580	2.9	79	0.00	15.07
24	Chrysene	1.561	1.599	-2.4	82	0.00	15.12
25 I	Perylene-d12	1.000	1.000	0.0	79	0.00	17.58
26	Benzo[b]fluoranthene	1.463	1.498	-2.4	76	0.00	16.97
27	Benzo[k]fluoranthene	1.571	1.638	-4.3	76	0.00	17.01
28 C	Benzo[a]pyrene	1.350	1.361	-0.8	75	0.00	17.48
29	Indeno[1,2,3-cd]pyrene	1.228	1.147	6.6	70	0.00	19.16
30	Dibenz[a,h]anthracene	1.197	1.140	4.8	71	0.00	19.21
31	Benzo[g,h,i]perylene	1.407	1.365	3.0	73	0.00	19.50

(#) = Out of Range  
 R13830.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0  
 Mon May 26 20:09:34 2008



## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2079-DFTPP

Injection Date: 05/19/08

Lab File ID: W040585.D

Injection Time: 15:42

Instrument ID: GCMSW

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	92220	34.8	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	97517	36.8	Pass
70	Less than 2.0% of mass 69	586	0.22 (0.6) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	127264	48.1	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	264832	100.0	Pass
199	5.0 - 9.0% of mass 198	18662	7.0	Pass
275	10.0 - 30.0% of mass 198	65664	24.8	Pass
365	1.0 - 100.0% of mass 198	6305	2.4	Pass
441	Present, but less than mass 443	26572	10.0 (77.4) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	176952	66.8	Pass
443	17.0 - 23.0% of mass 442	34312	13.0 (19.4) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2079-IC2079	W040587.D	05/19/08	16:35	00:53	Initial cal 1
SW2079-IC2079	W040588.D	05/19/08	17:02	01:20	Initial cal 2
SW2079-IC2079	W040589.D	05/19/08	17:28	01:46	Initial cal 3
SW2079-ICC2079	W040590.D	05/19/08	17:54	02:12	Initial cal 4
SW2079-IC2079	W040591.D	05/19/08	18:20	02:38	Initial cal 5
SW2079-IC2079	W040592.D	05/19/08	18:47	03:05	Initial cal 6
SW2079-IC2079	W040593.D	05/19/08	19:13	03:31	Initial cal 7
SW2079-ICV2079	W040594.D	05/19/08	19:39	03:57	Initial cal verification 4

## Initial Calibration Summary

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2079-ICC2079  
 Lab FileID: W040590.D

## Response Factor Report MSBNA01

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Tue May 20 10:59:33 2008  
 Response via : Initial Calibration

## Calibration Files

L1 =W040587.D L2 =W040588.D L3 =W040589.D L4 =W040590.D  
 L5 =W040591.D L6 =W040592.D L7 =W040593.D icv =W040594.D

Compound	L1	L2	L3	L4	L5	L6	L7	icv	Avg %RSD
1) I Naphthalene-d8	-----ISTD-----								
2) Nitrobenzene	0.345	0.354	0.358	0.358	0.348	0.332	0.315	0.344	4.52
3) N-nitroso-di		0.110	0.100	0.111	0.101	0.088	0.094	0.101	8.87
4) Naphthalene	1.092	1.075	1.023	1.013	0.973	0.816	0.795	0.970	12.25
5) 2-Methylnaph	0.736	0.733	0.710	0.701	0.671	0.612	0.562	0.675	9.69
6) 1-Methylnaph	0.703	0.690	0.665	0.649	0.637	0.552	0.537	0.633	10.27
7) I Acenaphthene-d10	-----ISTD-----								
8) Hexachlorocy		0.204	0.249	0.262	0.284	0.287	0.270	0.259	11.78
9) 2-Fluorobiph	1.629	1.607	1.881	1.573	1.847	1.696	1.566	1.686	7.69
10) Acenaphthyle	1.963	1.942	1.923	1.876	1.848	1.620	1.605	1.825	8.25
11) Acenaphthene	1.249	1.232	1.219	1.189	1.166	1.087	0.956	1.157	8.94
12) 2,4-Dinitrop		0.044	0.076	0.112	0.149	0.155	0.171	0.118	42.16
13) 4-Nitropheno		0.185	0.209	0.224	0.239	0.212	0.236	0.218	9.24
14) Fluorene	1.324	1.294	1.292	1.271	1.219	1.143	1.058	1.229	7.83
15) I Phenanthrene-d10	-----ISTD-----								
16) Phenanthrene	1.250	1.219	1.171	1.163	1.136	1.002	0.966	1.130	9.45
17) Anthracene	1.244	1.230	1.188	1.175	1.171	1.030	0.967	1.144	9.10
18) Carbazole	1.053	1.058	1.010	0.949	0.873	0.755	0.682	0.912	16.22
---- Quadratic regr., Force(0,0) ---- Coefficient = 0.9999									
Response Ratio = 0.00000 + 1.01539 *A + -0.02651 *A^2									
19) Fluoranthene	1.224	1.243	1.192	1.185	1.163	1.040	0.980	1.147	8.59
20) I Chrysene-d12	-----ISTD-----								
21) Pyrene	1.893	1.868	1.833	1.869	1.777	1.594	1.484	1.760	9.01
22) Terphenyl-d1	1.052	1.045	1.058	1.096	1.069	0.972	0.917	1.030	6.08
23) Benzo[a]anth	1.572	1.542	1.547	1.607	1.638	1.542	1.493	1.563	3.05
24) Chrysene	1.524	1.534	1.546	1.615	1.616	1.505	1.468	1.544	3.55
25) I Perylene-d12	-----ISTD-----								
26) Benzo[b]fluo	1.318	1.369	1.421	1.464	1.558	1.474	1.395	1.428	5.50
27) Benzo[k]fluo	1.459	1.466	1.484	1.543	1.604	1.547	1.543	1.521	3.46
28) Benzo[a]pyre	1.205	1.230	1.259	1.333	1.390	1.321	1.296	1.290	4.96
29) Indeno[1,2,3	0.917	0.935	0.968	1.044	1.071	1.045	1.014	0.999	5.96
30) Dibenz[a,h]a	0.911	0.964	0.995	1.054	1.091	1.035	1.023	1.010	5.92
31) Benzo[g,h,i]	1.110	1.164	1.161	1.215	1.241	1.182	1.142	1.173	3.75

(#) = Out of Range ### Number of calibration levels exceeded format ###

SIM\_PAHC.M

Tue May 20 11:02:03 2008

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## Instrument Performance Check (DFTPP)

Page 1 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2081-DFTPP

Injection Date: 05/20/08

Lab File ID: W040620.D

Injection Time: 12:24

Instrument ID: GCMSW

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	58333	32.3	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	62693	34.7	Pass
70	Less than 2.0% of mass 69	344	0.19 (0.55) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	83085	46.0	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	180624	100.0	Pass
199	5.0 - 9.0% of mass 198	12295	6.8	Pass
275	10.0 - 30.0% of mass 198	43477	24.1	Pass
365	1.0 - 100.0% of mass 198	3960	2.2	Pass
441	Present, but less than mass 443	16990	9.4 (77.0) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	115827	64.1	Pass
443	17.0 - 23.0% of mass 442	22063	12.2 (19.0) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2081-CC2079	W040621.D	05/20/08	12:40	00:16	Continuing cal 4
OP25106-MB	W040624.D	05/20/08	13:38	01:14	Method Blank
OP25106-BS	W040625.D	05/20/08	14:04	01:40	Blank Spike
ZZZZZZ	W040626.D	05/20/08	14:36	02:12	(unrelated sample)
ZZZZZZ	W040627.D	05/20/08	15:02	02:38	(unrelated sample)
F57485-3	W040628.D	05/20/08	15:28	03:04	(used for QC only; not part of job F57525)
OP25106-MS	W040629.D	05/20/08	15:54	03:30	Matrix Spike
OP25106-MSD	W040630.D	05/20/08	16:21	03:57	Matrix Spike Duplicate
OP25102-MB	W040631.D	05/20/08	16:47	04:23	Method Blank
F57608-2	W040632.D	05/20/08	17:13	04:49	(used for QC only; not part of job F57525)
OP25102-MS	W040633.D	05/20/08	17:40	05:16	Matrix Spike
OP25102-MSD	W040634.D	05/20/08	18:06	05:42	Matrix Spike Duplicate
ZZZZZZ	W040635.D	05/20/08	18:32	06:08	(unrelated sample)
ZZZZZZ	W040636.D	05/20/08	18:59	06:35	(unrelated sample)
ZZZZZZ	W040637.D	05/20/08	19:25	07:01	(unrelated sample)
ZZZZZZ	W040638.D	05/20/08	19:51	07:27	(unrelated sample)
ZZZZZZ	W040639.D	05/20/08	20:17	07:53	(unrelated sample)
F57525-1	W040640.D	05/20/08	20:43	08:19	KWSM-GW-DRUM-1
F57525-3	W040641.D	05/20/08	21:09	08:45	KWSM-BCTF-GW-DRUM-3

# Instrument Performance Check (DFTPP)

Page 2 of 2

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2081-DFTPP

Injection Date: 05/20/08

Lab File ID: W040620.D

Injection Time: 12:24

Instrument ID: GCMSW

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	W040642.D	05/20/08	21:35	09:11	(unrelated sample)
ZZZZZZ	W040643.D	05/20/08	22:01	09:37	(unrelated sample)
ZZZZZZ	W040644.D	05/20/08	22:27	10:03	(unrelated sample)
ZZZZZZ	W040645.D	05/20/08	22:54	10:30	(unrelated sample)
ZZZZZZ	W040646.D	05/20/08	23:19	10:55	(unrelated sample)
ZZZZZZ	W040647.D	05/20/08	23:45	11:21	(unrelated sample)
ZZZZZZ	W040648.D	05/21/08	00:12	11:48	(unrelated sample)

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## Continuing Calibration Summary

Page 1 of 2

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2081-CC2079  
 Lab FileID: W040621.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\052008\W040621.D Vial: 2  
 Acq On : 20 May 2008 12:40 pm Operator: rayb  
 Sample : cc2079-4 Inst : MSBNA01  
 Misc : op25106,sw2081,1000,,,1,1,water Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Wed May 21 08:37:11 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	76	0.00	5.37
2 S	Nitrobenzene-d5	0.344	0.355	-3.2	78	0.00	4.77
3 P	N-nitroso-di-n-propylamin	0.101	0.095	5.9	72	0.00	4.66
4	Naphthalene	0.970	0.970	0.0	76	0.00	5.38
5	2-Methylnaphthalene	0.675	0.672	0.4	76	0.00	6.09
6	1-Methylnaphthalene	0.633	0.633	0.0	76	0.00	6.21
7 I	Acenaphthene-d10	1.000	1.000	0.0	76	0.00	7.44
8 P	Hexachlorocyclopentadiene	0.259	0.280	-8.1	75	0.00	6.27
9 S	2-Fluorobiphenyl	1.686	1.886	-11.9	77	0.00	6.55
10	Acenaphthylene	1.825	1.912	-4.8	78	0.00	7.23
11 C	Acenaphthene	1.157	1.173	-1.4	76	0.00	7.48
12 P	2,4-Dinitrophenol	0.118	0.150	-27.1#	76	0.01	7.61
13 P	4-Nitrophenol	0.218	0.239	-9.6	76	0.02	7.78
14	Fluorene	1.229	1.280	-4.1	80	0.00	8.29
15 I	Phenanthrene-d10	1.000	1.000	0.0	78	0.00	9.83
16	Phenanthrene	1.130	1.153	-2.0	79	0.00	9.87
17	Anthracene	1.144	1.188	-3.8	79	0.00	9.96
18	Carbazole	20.000	21.834	-9.2	85	0.00	10.31
19 C	Fluoranthene	1.147	1.190	-3.7	80	0.00	12.02
20 I	Chrysene-d12	1.000	1.000	0.0	78	0.00	14.68
21	Pyrene	1.760	1.812	-3.0	80	0.00	12.40
22 S	Terphenyl-d14	1.030	1.076	-4.5	79	0.00	12.85
23	Benzo[a]anthracene	1.563	1.632	-4.4	78	0.00	14.66
24	Chrysene	1.544	1.650	-6.9	80	0.00	14.72
25 I	Perylene-d12	1.000	1.000	0.0	76	0.00	17.16
26	Benzo[b]fluoranthene	1.428	1.524	-6.7	75	0.00	16.55
27	Benzo[k]fluoranthene	1.521	1.654	-8.7	79	0.00	16.59
28 C	Benzo[a]pyrene	1.290	1.389	-7.7	76	0.00	17.06
29	Indeno[1,2,3-cd]pyrene	0.999	0.950	4.9	68	0.00	18.71
30	Dibenz[a,h]anthracene	1.010	1.005	0.5	70	0.00	18.78
31	Benzo[g,h,i]perylene	1.173	1.150	2.0	71	0.00	19.05

## Continuing Calibration Summary

Page 2 of 2

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2081-CC2079  
Lab FileID: W040621.D

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

W040591.D SIM\_PAHC.M

Wed May 21 08:37:55 2008

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**ACCUTEST**  
F57525 Laboratories

## Instrument Performance Check (DFTPP)

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2082-DFTPP

Injection Date: 05/21/08

Lab File ID: W040652.D

Injection Time: 13:57

Instrument ID: GCMSW

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
51	30.0 - 60.0% of mass 198	86339	31.6	Pass
68	Less than 2.0% of mass 69	0	0.0 (0.0) <sup>a</sup>	Pass
69	Mass 69 relative abundance	95347	34.9	Pass
70	Less than 2.0% of mass 69	518	0.19 (0.54) <sup>a</sup>	Pass
127	40.0 - 60.0% of mass 198	124325	45.5	Pass
197	Less than 1.0% of mass 198	0	0.0	Pass
198	Base peak, 100% relative abundance	273347	100.0	Pass
199	5.0 - 9.0% of mass 198	18247	6.7	Pass
275	10.0 - 30.0% of mass 198	68549	25.1	Pass
365	1.0 - 100.0% of mass 198	6112	2.2	Pass
441	Present, but less than mass 443	29243	10.7 (76.8) <sup>b</sup>	Pass
442	40.0 - 100.0% of mass 198	195683	71.6	Pass
443	17.0 - 23.0% of mass 442	38065	13.9 (19.5) <sup>c</sup>	Pass

(a) Value is % of mass 69

(b) Value is % of mass 443

(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW2082-CC2079	W040653.D	05/21/08	14:20	00:23	Continuing cal 5
OP25131-BS	W040654.D	05/21/08	14:56	00:59	Blank Spike
OP25131-MB	W040655.D	05/21/08	15:23	01:26	Method Blank
ZZZZZZ	W040658.D	05/21/08	16:47	02:50	(unrelated sample)
ZZZZZZ	W040665.D	05/21/08	20:22	06:25	(unrelated sample)
ZZZZZZ	W040666.D	05/21/08	20:48	06:51	(unrelated sample)
ZZZZZZ	W040668.D	05/21/08	21:40	07:43	(unrelated sample)
ZZZZZZ	W040669.D	05/21/08	22:06	08:09	(unrelated sample)
ZZZZZZ	W040670.D	05/21/08	22:33	08:36	(unrelated sample)
ZZZZZZ	W040671.D	05/21/08	22:59	09:02	(unrelated sample)
OP25106-MB	W040672.D	05/21/08	23:25	09:28	Method Blank
ZZZZZZ	W040673.D	05/21/08	23:51	09:54	(unrelated sample)
ZZZZZZ	W040675.D	05/22/08	00:43	10:46	(unrelated sample)
ZZZZZZ	W040676.D	05/22/08	01:09	11:12	(unrelated sample)
ZZZZZZ	W040677.D	05/22/08	01:35	11:38	(unrelated sample)

## Continuing Calibration Summary

Page 1 of 2

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2082-CC2079  
 Lab FileID: W040653.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\052108\W040653.D Vial: 2  
 Acq On : 21 May 2008 2:20 pm Operator: rayb  
 Sample : cc2079-5 Inst : MSBNA01  
 Misc : op25131,sw2082,30.0,,,1,1,soil Multiplr: 1.00  
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\SIM\_PAHC.M (RTE Integrator)  
 Title : PAH's by 8270 SIM  
 Last Update : Thu May 22 12:56:55 2008  
 Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Naphthalene-d8	1.000	1.000	0.0	91	0.00	5.33
2 S	Nitrobenzene-d5	0.344	0.359	-4.4	94	0.00	4.74
3 P	N-nitroso-di-n-propylamin	0.101	0.104	-3.0	94	0.00	4.64
4	Naphthalene	0.970	0.933	3.8	88	0.00	5.35
5	2-Methylnaphthalene	0.675	0.670	0.7	91	0.00	6.06
6	1-Methylnaphthalene	0.633	0.620	2.1	89	0.00	6.16
7 I	Acenaphthene-d10	1.000	1.000	0.0	90	0.00	7.39
8 P	Hexachlorocyclopentadiene	0.259	0.284	-9.7	90	0.00	6.23
9 S	2-Fluorobiphenyl	1.686	1.560	7.5	76	0.00	6.50
10	Acenaphthylene	1.825	1.772	2.9	86	0.00	7.18
11 C	Acenaphthene	1.157	1.170	-1.1	90	0.00	7.43
12 P	2,4-Dinitrophenol	0.118	0.146	-23.7#	89	0.01	7.56
13 P	4-Nitrophenol	0.218	0.246	-12.8	93	0.02	7.73
14	Fluorene	1.229	1.226	0.2	91	0.01	8.24
15 I	Phenanthrene-d10	1.000	1.000	0.0	92	0.00	9.77
16	Phenanthrene	1.130	1.132	-0.2	92	0.00	9.82
17	Anthracene	1.144	1.151	-0.6	91	0.01	9.92
18	Carbazole	20.000	20.579	-2.9	95	0.02	10.26
19 C	Fluoranthene	1.147	1.175	-2.4	93	0.02	11.96
20 I	Chrysene-d12	1.000	1.000	0.0	98	0.00	14.63
21	Pyrene	1.760	1.690	4.0	93	0.00	12.35
22 S	Terphenyl-d14	1.030	1.038	-0.8	95	0.00	12.80
23	Benzo[a]anthracene	1.563	1.577	-0.9	94	0.00	14.61
24	Chrysene	1.544	1.615	-4.6	98	0.00	14.67
25 I	Perylene-d12	1.000	1.000	0.0	95	0.00	17.09
26	Benzo[b]fluoranthene	1.428	1.546	-8.3	95	0.00	16.49
27	Benzo[k]fluoranthene	1.521	1.596	-4.9	95	0.00	16.54
28 C	Benzo[a]pyrene	1.290	1.376	-6.7	95	-0.06	17.00
29	Indeno[1,2,3-cd]pyrene	0.999	1.041	-4.2	93	-0.06	18.66
30	Dibenz[a,h]anthracene	1.010	1.085	-7.4	95	-0.06	18.72
31	Benzo[g,h,i]perylene	1.173	1.209	-3.1	93	-0.06	18.99



## Continuing Calibration Summary

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: SW2082-CC2079  
Lab FileID: W040653.D

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(#) = Out of Range

W040591.D SIM\_PAHC.M

SPCC's out = 0 CCC's out = 0

Thu May 22 12:58:01 2008

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# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	SR643-CC642	Injection Date:	05/23/08
Lab File ID:	R13855.D	Injection Time:	11:02
Instrument ID:	GCMSR	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	441885	5.61	217028	7.76	327237	10.22	214114	15.12	176906	17.63
Upper Limit <sup>a</sup>	883770	6.11	434056	8.26	654474	10.72	428228	15.62	353812	18.13
Lower Limit <sup>b</sup>	220943	5.11	108514	7.26	163619	9.72	107057	14.62	88453	17.13

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP25149-BS	324297	5.61	160696	7.77	236810	10.23	155926	15.13	130636	17.63
OP25149-MB	289707	5.61	142359	7.76	207473	10.21	128806	15.12	102017	17.62
ZZZZZZ	314501	5.62	171033	7.78	232419	10.25	146743	15.13	115008	17.63
ZZZZZZ	333069	5.62	170817	7.79	245121	10.23	170707	15.12	146936	17.63
ZZZZZZ	320762	5.62	166340	7.78	239217	10.24	161453	15.12	134596	17.63
ZZZZZZ	274127	5.62	149276	7.78	201209	10.25	130615	15.13	105696	17.62
ZZZZZZ	336419	5.62	175379	7.77	249662	10.24	165848	15.12	134814	17.62
ZZZZZZ	314386	5.62	177203	7.79	229775	10.25	146960	15.13	117793	17.62
ZZZZZZ	301582	5.62	152767	7.77	227136	10.23	158000	15.12	143342	17.62
ZZZZZZ	328142	5.62	162982	7.77	242661	10.23	163332	15.12	143532	17.62
OP25149-MS	277549	5.61	137530	7.76	202841	10.21	131999	15.12	116899	17.62
OP25149-MSD	302480	5.61	150716	7.76	222396	10.21	153105	15.12	141577	17.62
ZZZZZZ	297723	5.61	148192	7.76	222424	10.21	154559	15.12	138418	17.61
ZZZZZZ	334534	5.61	166794	7.76	253155	10.21	179192	15.12	163043	17.62
F57525-2	304286	5.61	150963	7.76	227418	10.21	157687	15.12	142177	17.61
ZZZZZZ	308336	5.61	151342	7.76	227399	10.21	155676	15.12	132185	17.61
ZZZZZZ	333436	5.61	164994	7.76	245147	10.21	168071	15.11	143653	17.61
ZZZZZZ	330622	5.61	162843	7.76	245025	10.21	168915	15.12	145790	17.61
F57653-4	319662	5.61	159428	7.76	240148	10.21	164739	15.11	139281	17.61

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	SR644-CC642	Injection Date:	05/26/08
Lab File ID:	R13881.D	Injection Time:	19:40
Instrument ID:	GCMSR	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	258756	5.59	128110	7.73	182572	10.18	124452	15.08	114694	17.58
Upper Limit <sup>a</sup>	517512	6.09	256220	8.23	365144	10.68	248904	15.58	229388	18.08
Lower Limit <sup>b</sup>	129378	5.09	64055	7.23	91286	9.68	62226	14.58	57347	17.08

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP25143-BS <sup>c</sup>	279440	5.59	138776	7.73	205463	10.19	147123	15.09	140609	17.58
OP25143-MB	287150	5.59	141408	7.73	210471	10.18	153349	15.08	151415	17.58
ZZZZZZ	272392	5.59	135787	7.73	204668	10.18	154839	15.08	148602	17.58
ZZZZZZ	301394	5.59	148424	7.73	222351	10.18	162852	15.08	155113	17.58
ZZZZZZ	299390	5.59	147728	7.73	220665	10.18	164488	15.08	162128	17.58
OP25149-MB	234096	5.59	115886	7.73	170488	10.18	118976	15.09	111330	17.58
F57525-4	241208	5.59	117046	7.73	173098	10.18	125424	15.08	120449	17.58
ZZZZZZ	297453	5.59	145324	7.73	211728	10.18	147520	15.08	137578	17.58

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.  
(c) Insufficient sample for MS/MSD.

7.5

7

## Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Check Std: SW2081-CC2079

Injection Date: 05/20/08

Lab File ID: W040621.D

Injection Time: 12:40

Instrument ID: GCMSW

Method: SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	266669	5.37	139136	7.44	202470	9.83	136794	14.68	119645	17.16
Upper Limit <sup>a</sup>	533338	5.87	278272	7.94	404940	10.33	273588	15.18	239290	17.66
Lower Limit <sup>b</sup>	133335	4.87	69568	6.94	101235	9.33	68397	14.18	59823	16.66

Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP25106-MB	315215	5.37	165167	7.44	242609	9.83	167531	14.68	152654	17.16
OP25106-BS	292583	5.37	150089	7.44	216013	9.83	148202	14.68	133292	17.15
ZZZZZZ	293607	5.36	153540	7.44	221907	9.83	157191	14.68	142683	17.15
ZZZZZZ	327357	5.37	171621	7.44	248445	9.83	173199	14.68	155375	17.16
F57485-3	327812	5.36	172177	7.44	251085	9.83	171320	14.68	152814	17.16
OP25106-MS	332884	5.37	173446	7.44	255374	9.83	176164	14.68	158888	17.16
OP25106-MSD	336440	5.37	177973	7.44	256948	9.83	176636	14.68	159034	17.16
OP25102-MB	276486	5.36	146543	7.44	213158	9.82	143768	14.68	125726	17.15
F57608-2	303457	5.37	161868	7.45	204194	9.86	126276	14.73	108514	17.23
OP25102-MS	277511	5.37	144844	7.45	202238	9.84	135154	14.72	119370	17.20
OP25102-MSD	285199	5.37	145870	7.46	195086	9.87	121876	14.74	98896	17.23
ZZZZZZ	304104	5.37	163189	7.44	230529	9.84	149242	14.70	124415	17.18
ZZZZZZ	307376	5.37	164069	7.44	228850	9.84	147668	14.72	121104	17.20
ZZZZZZ	351157	5.36	186123	7.44	258517	9.84	163838	14.72	133227	17.21
ZZZZZZ	351423	5.37	200616	7.44	289932	9.84	176546	14.70	148986	17.17
ZZZZZZ	347401	5.36	192711	7.44	278797	9.84	178189	14.70	155283	17.17
F57525-1	362445	5.37	201531	7.44	294629	9.84	194967	14.70	164275	17.18
F57525-3	387568	5.37	202820	7.44	296643	9.84	190680	14.70	159416	17.17
ZZZZZZ	398265	5.37	205219	7.44	293307	9.84	187407	14.69	159460	17.18
ZZZZZZ	297375	5.40	193142	7.45	267051	9.84	161782	14.69	136449	17.18
ZZZZZZ	363477	5.37	191220	7.44	272031	9.84	177717	14.69	148298	17.17
ZZZZZZ	360286	5.37	188861	7.44	267689	9.84	177246	14.70	157264	17.18
ZZZZZZ	348899	5.37	181501	7.44	262598	9.84	170029	14.70	143436	17.17
ZZZZZZ	374831	5.37	195321	7.44	276188	9.84	177078	14.70	149594	17.17
ZZZZZZ	357565	5.37	189242	7.44	272775	9.84	177139	14.69	139887	17.18

IS 1 = Naphthalene-d8

IS 2 = Acenaphthene-D10

IS 3 = Phenanthrene-d10

IS 4 = Chrysene-d12

IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Semivolatile Internal Standard Area Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	SW2082-CC2079	Injection Date:	05/21/08
Lab File ID:	W040653.D	Injection Time:	14:20
Instrument ID:	GCMSW	Method:	SW846 8270C BY SIM

	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	319552	5.33	165682	7.39	238393	9.77	170884	14.63	149462	17.09
Upper Limit <sup>a</sup>	639104	5.83	331364	7.89	476786	10.27	341768	15.13	298924	17.59
Lower Limit <sup>b</sup>	159776	4.83	82841	6.89	119197	9.27	85442	14.13	74731	16.59

Lab Sample ID	IS 1		IS 2		IS 3		IS 4		IS 5	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
OP25131-BS	275716	5.33	143690	7.39	207136	9.77	147957	14.62	132893	17.09
OP25131-MB	304322	5.32	158624	7.39	229810	9.77	166184	14.62	151455	17.09
ZZZZZZ	314424	5.33	164788	7.39	232623	9.77	160344	14.63	132855	17.09
ZZZZZZ	297564	5.34	155003	7.40	215029	9.80	129134	14.66	107553	17.15
ZZZZZZ	295729	5.33	154553	7.40	215340	9.79	129390	14.65	110398	17.13
ZZZZZZ	347748	5.33	179850	7.40	233960	9.80	126519	14.67	96938	17.16
ZZZZZZ	309145	5.34	158646	7.40	216371	9.80	128174	14.67	102459	17.16
ZZZZZZ	310012	5.34	157632	7.40	212852	9.80	129302	14.66	105465	17.14
ZZZZZZ	354594	5.34	183363	7.40	252558	9.80	156524	14.66	127299	17.15
OP25106-MB	317684	5.34	168920	7.40	245537	9.80	180283	14.66	151504	17.14
ZZZZZZ	305194	5.34	160411	7.40	238353	9.80	169198	14.66	134940	17.14
ZZZZZZ	318055	5.34	163463	7.40	226247	9.80	147662	14.66	122514	17.14
ZZZZZZ	346387	5.34	175914	7.40	254603	9.80	177965	14.67	146031	17.16
ZZZZZZ	321065	5.34	168032	7.40	240228	9.80	169359	14.67	136991	17.15

IS 1 = Naphthalene-d8  
IS 2 = Acenaphthene-D10  
IS 3 = Phenanthrene-d10  
IS 4 = Chrysene-d12  
IS 5 = Perylene-d12

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.  
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

7.5  
7

## Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: FLORIDA-PRO

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 <sup>a</sup>
F57525-1	IJ47393.D	104.0
F57525-3	IJ47396.D	102.0
OP25103-BS	IJ47384.D	93.0
OP25103-MB	IJ47385.D	105.0
OP25103-MB	OP80997.D	89.0
OP25103-MS	IJ47394.D	111.0
OP25103-MSD	IJ47395.D	109.0

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = o-Terphenyl	38-122%
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(a) Recovery from GC signal #1

9.4  
9

# Semivolatile Surrogate Recovery Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Method: FLORIDA-PRO

Matrix: SO

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 <sup>a</sup>
F57525-2	IJ47409.D	85.0
F57525-4	IJ47410.D	80.0
OP25098-BS	IJ47407.D	91.0
OP25098-MB	IJ47408.D	86.0
OP25098-MS	IJ47413.D	79.0
OP25098-MSD	IJ47414.D	93.0

Surrogate Compounds	Recovery Limits
------------------------	--------------------

S1 = o-Terphenyl	47-111%
------------------	---------

(a) Recovery from GC signal #1

9.4

9

# GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	GIJ1781-CC1772	Injection Date:	05/19/08
Lab File ID:	IJ47374.D	Injection Time:	20:14
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1<sup>a</sup>  
RT

Check Std	5.43
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP25103-BS	IJ47384.D	05/19/08	23:56	5.43
OP25103-MB	IJ47385.D	05/20/08	00:18	5.43
ZZZZZZ	IJ47386.D	05/20/08	00:40	5.43
ZZZZZZ	IJ47387.D	05/20/08	01:02	5.43
ZZZZZZ	IJ47388.D	05/20/08	01:24	5.43
ZZZZZZ	IJ47389.D	05/20/08	01:46	5.43
ZZZZZZ	IJ47390.D	05/20/08	02:08	5.43

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5  
6



## GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	GJJ1781-CC1772	Injection Date:	05/20/08
Lab File ID:	IJ47391.D	Injection Time:	02:30
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1<sup>a</sup>  
RT

Check Std	5.43
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
F57525-1	IJ47393.D	05/20/08	03:14	5.43
OP25103-MS	IJ47394.D	05/20/08	03:36	5.43
OP25103-MSD	IJ47395.D	05/20/08	03:58	5.43
F57525-3	IJ47396.D	05/20/08	04:20	5.43
GJJ1781-ECC1772	IJ47397.D	05/20/08	04:42	5.43

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5  
6

# GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Check Std:	GIJ1782-CC1772	Injection Date:	05/21/08
Lab File ID:	IJ47400.D	Injection Time:	09:26
Instrument ID:	GCIJ	Method:	FLORIDA-PRO

S1 <sup>a</sup>  
RT

Check Std	5.43
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Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP25098-BS	IJ47407.D	05/21/08	12:03	5.43
OP25098-MB	IJ47408.D	05/21/08	12:25	5.43
F57525-2	IJ47409.D	05/21/08	12:47	5.43
F57525-4	IJ47410.D	05/21/08	13:10	5.43
ZZZZZZ	IJ47411.D	05/21/08	13:32	5.43
F57546-2	IJ47412.D	05/21/08	13:55	5.43
OP25098-MS	IJ47413.D	05/21/08	14:17	5.43
OP25098-MSD	IJ47414.D	05/21/08	14:40	5.43
ZZZZZZ	IJ47415.D	05/21/08	15:02	5.43

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5  
6

# GC Surrogate Retention Time Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Check Std:	GOP2105-CC2104	Injection Date:	05/22/08
Lab File ID:	OP80994.D	Injection Time:	10:59
Instrument ID:	GCOP	Method:	FLORIDA-PRO

S1 <sup>a</sup>

RT

Check Std	5.84
-----------	------

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 <sup>a</sup> RT
OP25103-MB	OP80997.D	05/22/08	12:09	5.84
ZZZZZZ	OP80998.D	05/22/08	12:32	5.83

Surrogate  
Compounds

S1 = o-Terphenyl

(a) Retention time from GC signal #1

9.5  
9

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25098-MS	IJ47413.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782
OP25098-MSD	IJ47414.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782
F57546-2	IJ47412.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-2, F57525-4

CAS No.	Compound	F57546-2 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (C8-C40)	9.7	U	33.5	26.6	79	29.9	89	12	53-107/35

CAS No.	Surrogate Recoveries	MS	MSD	F57546-2	Limits
84-15-1	o-Terphenyl	79%	93%	84%	47-111%

## Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25103-MS	IJ47394.D	1	05/20/08	JB	05/19/08	OP25103	GIJ1781
OP25103-MSD	IJ47395.D	1	05/20/08	JB	05/19/08	OP25103	GIJ1781
F57525-1	IJ47393.D	1	05/20/08	JB	05/19/08	OP25103	GIJ1781

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-1, F57525-3

CAS No.	Compound	F57525-1 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C8-C40)	0.389	1.63	2.25	114*	2.15	108	5	54-110/28

CAS No.	Surrogate Recoveries	MS	MSD	F57525-1	Limits
84-15-1	o-Terphenyl	111%	109%	104%	38-122%

**Blank Spike Summary**

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25098-BS	IJ47407.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-2, F57525-4

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH (C8-C40)	28.3	23.9	84	53-107

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	91%	47-111%

9.2

9

## Blank Spike Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25103-BS	IJ47384.D	1	05/19/08	JB	05/19/08	OP25103	GIJ1781

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-1, F57525-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH (C8-C40)	0.85	0.803	94	54-110

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	93%	38-122%

9.2

9

## Method Blank Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25098-MB	IJ47408.D	1	05/21/08	JB	05/16/08	OP25098	GIJ1782

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-2, F57525-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	8.3	5.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	86% 47-111%

9.1

9



## Method Blank Summary

Page 1 of 1

Job Number: F57525

Account: TETRSCAI Tetra Tech NUS

Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25103-MB	IJ47385.D	1	05/20/08	JB	05/19/08	OP25103	GIJ1781

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	105% 38-122%

9.1

6

**Method Blank Summary**

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP25103-MB	OP80997.D	1	05/22/08	JB	05/19/08	OP25103	GOP2105

The QC reported here applies to the following samples:

Method: FLORIDA-PRO

F57525-1, F57525-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C8-C40)	ND	0.25	0.17	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	89% 38-122%

9.1

6

## Initial Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1772-ICC1772  
Lab FileID: IJ46879.D

## Response Factor Report FID 1

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Mon May 05 13:33:36 2008  
Response via : Initial Calibration

## Calibration Files

255 =IJ46876.D 340 =IJ46877.D 680 =IJ46878.D 1020=IJ46879.D  
1360=IJ46880.D 1700=IJ46881.D 2125=IJ46882.D 4250=IJ46883.D

Compound	255	340	680	1020	1360	1700	2125	4250	Avg	%RSD
1) O-TERPHENYL	3.650	3.617	3.546	3.555	3.495	2.834			3.449	E4 8.89
2) TPH (C8-C40)	3.632	3.435	3.400	3.354	3.286	2.654	3.280	3.265	3.288	E4 8.60

(#) = Out of Range ### Number of calibration levels exceeded format ###

FL\_PRO\_F.M

Tue May 06 09:29:38 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1781-CC1772  
Lab FileID: IJ47374.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47374.D Vial: 28  
Acq On : 19 May 2008 8:14 pm Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25098,gij1781,30.0,,,1,1,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	60.000	64.646	-7.7	105	0.00	5.38-	5.48
2 H	TPH (C8-C40)	1020.000	1235.831	-21.2	119	0.00	2.24-	10.83

(#)= Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Wed May 21 09:19:48 2008

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1781-CC1772  
Lab FileID: IJ47382.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47382.D Vial: 35  
Acq On : 19 May 2008 11:12 pm Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25098,gij1781,30.0,,,1,1,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	60.000	63.821	-6.4	103	0.00	5.38-	5.48
2 H	TPH (C8-C40)	1020.000	1056.205	-3.5	102	0.00	2.24-	10.83

(#)= Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Wed May 21 09:19:48 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1781-CC1772  
Lab FileID: IJ47391.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47391.D Vial: 43  
Acq On : 20 May 2008 2:30 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25103,gij1781,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	63.878	-6.5	103	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1045.392	-2.5	100	0.00	2.24-10.83

(# ) = Out of Range

IJ46879.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Wed May 21 09:19:48 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1781-ECC1772  
Lab FileID: IJ47397.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0519PRO\IJ47397.D Vial: 48  
Acq On : 20 May 2008 4:42 am Operator: julieb  
Sample : ecc1772-1020 Inst : FID 1  
Misc : op25103,gij1781,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	60.000	65.501	-9.2	106	0.00	5.38	5.48
2 H	TPH (C8-C40)	1020.000	1077.433	-5.6	104	0.00	2.24	10.83

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Wed May 21 09:19:48 2008

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1782-CC1772  
Lab FileID: IJ47400.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0521PRO\IJ47400.D Vial: 2  
Acq On : 21 May 2008 9:26 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25103,gij1782,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	63.329	-5.5	102	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1050.784	-3.0	101	0.00	2.24-10.83

(# ) = Out of Range

IJ46879.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0

Thu May 22 09:42:49 2008

6 9.6



## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1782-CC1772  
Lab FileID: IJ47401.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0521PRO\IJ47401.D Vial: 3  
Acq On : 21 May 2008 9:48 am Operator: julieb  
Sample : cc1772-340 Inst : FID 1  
Misc : op25103,gij1782,1000,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	20.000	22.062	-10.3	105	0.00	5.38- 5.48
2 H	TPH (C8-C40)	340.000	379.266	-11.5	107	0.00	2.24-10.83

(#) = Out of Range  
IJ46877.D FL\_PRO\_F.M

SPCC's out = 0 CCC's out = 0  
Thu May 22 09:43:04 2008

6 9.6

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1782-CC1772  
Lab FileID: IJ47405.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0521PRO\IJ47405.D Vial: 6  
Acq On : 21 May 2008 11:18 am Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25103,gij1782,1050,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT	Window
1 S	O-TERPHENYL	60.000	67.203	-12.0	109	0.00	5.38-	5.48
2 H	TPH (C8-C40)	1020.000	1121.228	-9.9	108	0.00	2.24-	10.83

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Thu May 22 09:42:49 2008

## Continuing Calibration Summary

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GIJ1782-CC1772  
Lab FileID: IJ47416.D

## Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\0521PRO\IJ47416.D Vial: 16  
Acq On : 21 May 2008 3:25 pm Operator: julieb  
Sample : cc1772-1020 Inst : FID 1  
Misc : op25098,giJ1782,30.2,,,1,2,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\1\METHODS\FL\_PRO\_F.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Fri May 16 11:20:03 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	66.354	-10.6	107	0.00	5.38- 5.48
2 H	TPH (C8-C40)	1020.000	1113.567	-9.2	107	0.00	2.24-10.83

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

IJ46879.D FL\_PRO\_F.M

Thu May 22 09:42:49 2008

# Initial Calibration Summary

Page 1 of 1

Job Number: F57525  
 Account: TETRSCAI Tetra Tech NUS  
 Project: Sigsbee Marina; NAS Key West, FL

Sample: GOP2104-ICC2104  
 Lab FileID: OP80956.D

## Response Factor Report FID 2

Method : C:\HPCHEM\2\METHODS\FL\_PRO\_R.M (Chemstation Integrator)  
 Title : TPH by FL\_PRO  
 Last Update : Thu May 22 14:48:49 2008  
 Response via : Initial Calibration

### Calibration Files

255 =OP80953.D 340 =OP80954.D 680 =OP80955.D 1020=OP80956.D  
 1360=OP80957.D 1700=OP80958.D 2125=OP80959.D 4250=OP80960.D

Compound	255	340	680	1020	1360	1700	2125	4250	Avg %RSD
1) O-TERPHENYL	1.932	1.948	1.916	1.900	1.901	1.991		1.932 E4	1.78
2) TPH (C8-C40)	1.818	1.825	1.776	1.758	1.768	1.837	1.789	1.755 1.791 E4	1.79

(#) = Out of Range ### Number of calibration levels exceeded format ###

FL\_PRO\_R.M

Thu May 22 15:00:37 2008

6 9.6

**Continuing Calibration Summary**

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GOP2105-CC2104  
Lab FileID: OP80994.D

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Evaluate Continuing Calibration Report

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Data File : C:\HPCHEM\2\DATA\0522PRO\OP80994.D      Vial: 2  
Acq On : 22 May 2008 10:59 am      Operator: julieb  
Sample : cc2104-1020      Inst : FID 2  
Misc : op25109,gop2105,30.0,,,1,1,soil      Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\FL\_PRO\_R.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Thu May 22 14:48:49 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000    Min. Rel. Area : 50%    Max. R.T. Dev 0.50min  
Max. RRF Dev : 25%    Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	64.357	-7.3	109	0.00	5.75- 5.91
2 H	TPH (C8-C40)	1020.000	1143.978	-12.2	114	0.00	2.31-11.59

---

(#) = Out of Range      SPCC's out = 0    CCC's out = 0  
OP80956.D FL\_PRO\_R.M      Thu May 22 15:09:53 2008

**6 96**

**Continuing Calibration Summary**

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GOP2105-CC2104  
Lab FileID: OP80995.D

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Evaluate Continuing Calibration Report

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Data File : C:\HPCHEM\2\DATA\0522PRO\OP80995.D Vial: 3  
Acq On : 22 May 2008 11:21 am Operator: julieb  
Sample : cc2104-340 Inst : FID 2  
Misc : op25109,gop2105,30.0,,,1,1,soil Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\FL\_PRO\_R.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Thu May 22 14:48:49 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	20.000	21.221	-6.1	105	0.00	5.75- 5.91
2 H	TPH (C8-C40)	340.000	403.692	-18.7	116	0.00	2.31-11.59

---

(# ) = Out of Range

OP80954.D FL\_PRO\_R.M

SPCC's out = 0 CCC's out = 0

Thu May 22 15:09:39 2008

**6 9.6**

**Continuing Calibration Summary**

Page 1 of 1

Job Number: F57525  
Account: TETRSCAI Tetra Tech NUS  
Project: Sigsbee Marina; NAS Key West, FL

Sample: GOP2105-CC2104  
Lab FileID: OP80999.D

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Evaluate Continuing Calibration Report

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Data File : C:\HPCHEM\2\DATA\0522PRO\OP80999.D Vial: 6  
Acq On : 22 May 2008 12:54 pm Operator: julieb  
Sample : cc2104-1020 Inst : FID 2  
Misc : op25103,gop2105,1050,,,1,1,water Multiplr: 1.00  
IntFile : events.e

Method : C:\HPCHEM\2\METHODS\FL\_PRO\_R.M (Chemstation Integrator)  
Title : TPH by FL\_PRO  
Last Update : Thu May 22 14:48:49 2008  
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Drift	Area%	Dev(min)	RT Window
1 S	O-TERPHENYL	60.000	65.893	-9.8	112	0.00	5.75- 5.91
2 H	TPH (C8-C40)	1020.000	1150.985	-12.8	115	0.00	2.31-11.59

---

(# ) = Out of Range

SPCC's out = 0 CCC's out = 0

OP80956.D FL\_PRO\_R.M

Thu May 22 15:09:53 2008

**6 9.6**